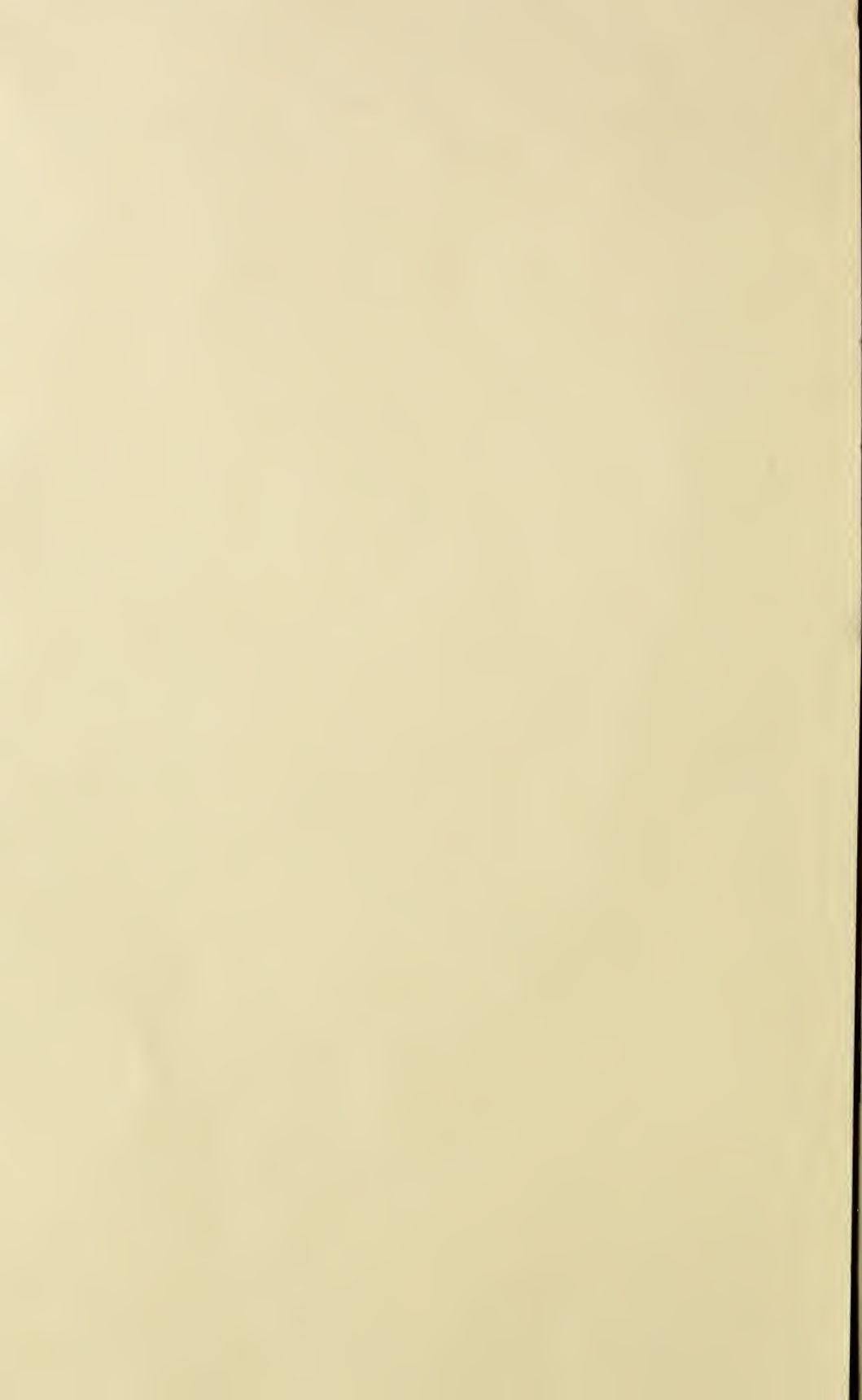


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THE MARYLAND FARMER:

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TOBACCO.

ITS HISTORY—USES—MODE OF CULTIVATION—
GENERAL MANAGEMENT, AND ITS
COMMERCIAL STATUS.

THE NEW SYSTEM OF GROWING TOBACCO.

Since expressing our opinion that similar culture and high manuring, in any or all the States where the soil suited the tobacco plant, as is pursued in the North, would produce as heavy crops, and bring as much money, we have been corroborated and sustained in our opinion by the following fact, taken from "*Calvert Journal*," a Maryland paper:

"HEAVY YIELD OF TOBACCO.—John G. Roberts, Esq., raised last year on one and a half acre of meadow land, three thousand four hundred (3,400) lbs. of tobacco."

This fact should stimulate our planters to enrich their tobacco fields, and give extra preparation of the land for this crop, and thus secure four times the amount of crop from the acre than they now make. A correspondent of the *Rural World* recommends hog's hair as one of the best manures, and the best covering ever put on a plant bed. "Pick the hair to pieces, and cover the bed as soon as the seed is sown, until the dirt is nearly hid by the hair, then lay on fine brush."

ITS COMMERCIAL STATUS.

From such statistics as we have been able to procure, we are satisfied that although tobacco is burdened and oppressed, in every land, by the heaviest taxation in every form, yet it is the first in rank of all agricultural productions, and is of greater commercial value than any article of commerce.—Millions of acres, and millions of men and women and children are devoted to its cultivation and manufacture. In the United States alone, in 1860 there were 1,478 establishments for manufacturing cigars, using \$3,500,000 worth of raw material, and employing a capital beside of more than \$3,000,000. In these manufactories seven thousand two hundred and sixty-six males, and seven hundred and

thirty-one females, were employed at a cost for labor of \$2,531,354. In 1860, the total value of these cigars was from the manufactories, \$9,068,778, and it is safe to say, at the present time, the value of the cigars manufactured yearly is not short of \$20,000,000, to which is to be added the amount of the manufacture of snuff and chewing tobacco. Although of comparatively late introduction into *China*, immense quantities of it is grown in that country, and it is computed that in *China* there are not less than 300,000,000 of smokers, because women and children, as well as men, smoke. To show still further the gigantic importance of this field of commerce, we quote from that excellent compendium, '*The Great Industries of the United States*,' to which we are indebted for much we write in this article: "The commercial intercourse created by the demand for it employs a vast amount of tonnage for its importation and exportation.—The home-trade in countries where it is used requires the attention of millions of men. In the year 1840 the number of dealers in Great Britain was 185,755. If in other countries there is the same proportion of dealers to population, the number so occupied cannot be less than 7,000,000."

When we thus see how vast is the tobacco trade, and how it is hampered by taxation by different Governments—the British Government receiving an annual revenue on an average of \$23,000,000; in a word, her tariff duties on each pound of tobacco is double what the American producer sells it for,—and seeing the growing demand there is for it, yet the inadequate price our planters receive, we confess our astonishment that no general, energetic concert of action among tobacco planters, so highly intelligent and influential as a class, which they always have been, has not been made, or attempted, so as to secure the interference of the Government to protect them against that system of discriminating import duties on tobacco by foreign powers, which cripple the energies and unjustly affect the rights and interests of this large class of agriculturists,

We trust ere long the growers of this great staple product of our country will throw off that apathy under which they have rested. We are encouraged too in the hope, by the efforts inaugurated in Missouri to advance the tobacco interest, on a scale commensurate with the immense importance of that interest. *The Tobacco Association of St. Louis* offer \$10,000 in premiums for tobacco! This looks well, and it will be a success, because competitors in crowds will be there, and buyers and planters and manufacturers, a thorough interchange of opinions will take place, and intelligent men will unite upon some course which will eventually result in good to the planters, we feel confident. We would beg leave here to suggest to our State Agricultural Society to offer larger premiums for tobacco, so as to attract the attention of planters to this subject, and encourage them to make a larger amount per acre, to cure and manage it better—say \$100 for the largest amount of lbs. or nett receipts from tobacco grown on one or two acres. We feel sure this would be better than offering four or five small premiums for single samples.

RAISING ONIONS FROM SEED.

A correspondent in Chesterfield county, Va., writes to the *Southern Farm and Home*, giving the following as his mode of raising onions from seed:

Frist-rate onions may be raised from seed anywhere in our country, if the seed are planted now as soon as possible in a rich, mellow soil—a sandy loam is the best. Be sure that the soil is fine and well-broken. Buy the best seed. Import it from Massachusetts. Soak it for twenty-four hours before sowing. Sow in drills eighteen inches apart, dropping the seed from four to six inches from each other, and cover not more than half an inch, pressing the soil firmly with a roller above the seed. When the plants come up and are large enough, thin to about a foot apart. Keep the soil loose and mellow, and when the stalks become as large as a penholder, be very careful to cultivate shallow, as the roots have occupied all the space between the rows, and if they are wounded or cut the consequence is destruction of the young plants. By midsummer, if the bed is dressed once with lime-plaster, onions of very respectable size will be made, which to my taste are much more palatable than those that are imported, or the large bulbs raised from buttons. At all events, even if we like “big *inyuns*,” we can raise the sets in this way to grow them instead of sending to Wethersfield, Mass., every year for them. It may be less troublesome to by the sets at the drugstore, but it is more expensive and not as satisfactory as home production.

The best manure for onions if the soil is not naturally rich enough, is a mixture of ashes, bone dust, plaster and salt. Peruvian guano and dissolved bones mixed with plaster or charcoal dust, make an excellent fertilizer for them.

A CHEAP AND SUBSTANTIAL FENCE.

Allow me to tell you how to make it. First stretch a line where a fence is to be made, then have prepared posts that are sharpened to a point that are seven feet long and about six inches through. Measure off eight feet of the ground and make a hole with a pointed bar about three feet deep, and sink the post firmly into the hole, and continue on so the length of the line or fence to be built. Then plow on each side of the line its length so as to enable you to shovel easily. Then make a bank from each side of the line three feet high. Have the bank two feet wide on the bottom and one foot on the top. Smooth it off nicely on both sides. Then nail on the posts a board six or eight inches wide and sixteen feet long about six inches above the bank.

If the posts are too long saw them off even with the bank, then sow each side of the bank in quack grass, and sow it on fully from the bottom to the top, and on the top of the embankment; and the fence is finished. In a short time the quack grass will sprout and grow, and the mud will form a sward that will hold the bank from caving or sliding down, and the older the bank the stronger will it become. For who ever knew of quack grass ever running out of land, or of its roots growing weak or less. This makes a cheap, neat and durable fence, and as the grass grows on the sides, stock will eat it off and prevent its going to seed, for quack grass is always sweet, and cattle and sheep will eat it readily. Nor will it spread, for the ditch will prevent its roots crossing. Also, if it were to go to seed, it can easily be moved before it gets to seed. Such a fence will be firmly located, and nothing will go over or through it. The roots of the grass in a few years will penetrate through the embankment, holding the dirt and post tight, so that frost, floods, or treading of any kind will not affect it. Such a fence will do better on a permanent line or highways fence than for an inside fence that is to be taken up.—*New York Tribune*.

We should prefer the posts six feet long only, and set foot in the ground and the bank four feet broad at bottom, eighteen inches at top and sowed with clover or timothy with two plank or No. 8 wire above the bank. The posts would then be four feet in the ground, and from the bottom of the excavation to the top rail would be over six feet high. If wire were used the posts need not be nearer than sixteen or twenty-four feet apart.

BUTTER.—A correspondent says that a great portion of the flavor of fresh butter is destroyed by the usual mode of washing, and he recommends a thorough kneading for the removal of the butter-milk, and a subsequent pressing in a linen cloth. Butter thus prepared, according to this authority, is pre-eminent for sweetness of taste and flavor—qualities which are retained for a long time. To improve manufactured butter, we are advised by the same authority to work it thoroughly with fresh cold milk, and then to wash it in clear cold water,

Agricultural Calendar.

FARM WORK FOR APRIL.

This month is the commencement of hard labor on the farm. It is usually propitious, and we trust will be so this year, to a greater degree than commonly experienced, as it can in that way alone compensate for the severity and the violent changes in the humor of its three predecessors. Verily, the weather record for the year 1873 forms a notable epoch in the history of this country.

OATS.

If you have not finished seeding your oats and clover seed, and spreading your plaster, let each and all be done with the shortest possible delay.

TOBACCO.

Keep the beds clean. Rainy weather can be devoted to the preparation of your tobacco for market. It has been dull for some time past, but as the season advances, the prospect brightens.

CORN.

Plant this important crop as soon as you have prepared thoroughly, the ground for its reception, and not only brought it into fine tilth by cultivation, but heavily fertilized the land with some one or more of the reliable super-phosphatic manures now in the market. See that what you get contains a large quantity of pure bone, sulphuric acid and potash, these three ingredients entering largely into the constituency of King Corn. Plant no sort but what is thought to be the best of its kind.—There are several superior samples of yellow and white corn now offered in the market of Baltimore for seed. Much depends upon the grain planted, whether the crop will meet expectations. Compared with other crops, the seed for a corn crop costs but a trifle, therefore any farmer can always get a peck or bushel of the best seed corn in the country—or he can make yearly trial of all the most highly recommended sorts, and soon discover what sort pleases him best, and suits his soil best.

POTATOES.

Potatoes should now be planted, to come in as an early fall crop. Follow directions of the last number for preparation of the ground, and select good seed; Early Rose first, White Peach Blow second, pure Maine Carters third, (though often are superior to Peach Blows,) are our selections for planting for home use. For market, we would advise our friends to try some of the newer sorts, such as the "Peerless."

It has been tried by several large growers of potatoes, and once by ourselves with eminent success, *the pinching off or cutting off an inch of the tops and*

side branches, as soon as the plants are six inches high, and again in three or four weeks after. The labor and time is small—children can perform it. By this method, it is claimed, that this check to the development of the stem and branches is a stimulus to the nutrient matters in the plant, in the direction of both the roots and the multiplication of the branches above the ground, which not only favors the power of the root, but also strengthens the roots and stalks to such a degree, that the matters prepared by the action of these parts are increased, and applied to the formation of tubers, while at the same time the direct action of the sun's rays on the soil is prevented by the thick foliage, and thus the drying up of the soil, and the injurious consequences are avoided. This theory, sustained by experiments, was reported several years ago by Dr. Klotzsch, to the Government of Prussia. It was generally tried by the farmers and gardeners of Prussia, and found to be of such beneficial use that we believe it has been continued to this day. Let our potato-growers try a few alternate rows, and report at "digging time" results.

SUGAR BEETS AND MANGOLDS.

Such root crops as sugar beet, mangold wurtzel, carrot and parsnip, may now be advantageously sown, although some insist that for the two former, the better plan is to transplant from beds. In either case, the crop will be unsatisfactory and unprofitable, unless the land had been deeply plowed and subsoiled, heavily manured, and then highly fertilized, while the land was being worked into tip-top condition, before the seed is sown or the plants set out. The carrot is a very valuable root for general use on the farm. It is so fine an alternative during winter and spring for horses. The beets are great provocatives to a large flow of milk, and of a richer character than that produced from turnips, on account of the greater amount of sugary properties. Parsnips are considered, by some dairymen, as very valuable food for cows, and in many places parsnip or carrot and cabbage are fed either together or alternately. Our own experience is that cabbage is a great milk producer, but we verily believe a cow would not increase her weight by actual gain of a pound of meat after she had consumed her own weight in cabbage. Every horseman should have at least a half acre of carrots under culture, for his horses the coming winter, especially for his favorite colts, or old brood mares; both classes are apt to become "hide-bound," unless their digestive organs are kept right.

CLOVER AND MEADOWS.

Do not pasture your meadows too late. Every hoof should now be removed from them. Nothing

injures young clover and meadow ground as the poaching of stock in wet weather, or when the land is wet. Nothing should be allowed to run on either meadow or clover intended for hay from the first of this month until the crop is cut. Clover intended for pasture, upon no consideration, should be turned upon before the first of May. We do not think it necessary, or even best, to keep off the stock until the field is in full blossom—but until it has reached a good height, and coming into blossom. If allowed to reach its highest growth before being depastured it becomes very coarse, and stock reject it; it falls in dense masses, and rots below while it dries on top, and prevents other grasses and the white clover, growing up to take its place, thus the after math or second grass crop of the pasture is much delayed. When the stock is turned in rather early they have the benefit of the entire growth, and before they have consumed the clover crop, and the clover ceased to reproduce itself, the seeds of other grasses, and the white clover, having sufficiency of light and air, will vegetate and come into place as the clover disappears, therefore by this course the pasture will all the time be better and of much longer duration.

STOCK OF ALL KINDS.

What we said last month about stock of all sorts, cows, horses, hogs, sheep, and young stock, we would desire to refer to as our views and hints on the same subjects for the present month.

POULTRY HOUSES.

Continue to manage the poultry houses as we suggested last month, and prepare for the demand your fowls will make on you soon for setting boxes or nests, and coops for the young broods. Get together all the sweepings and droppings of the poultry houses and yards you have saved during the past winter, and add to it the accumulations of the pigeon house, and make a splendid compost for the corn hills, where the land is very poor, or for your tobacco ground—2 parts poultry manure, 2 parts plaster, 2 parts woods' earth, 1 part unleached ashes, 1 part salt. We suppose you to have saved at least 20 bushels of manure; to this you add 20 bushels of plaster, and of earth 20, salt 10 and ashes 10, being in all a bulk of 80 bushels of an article of fertilizer hard to beat. You thus have half a pint of this powerful manure for 10,240 hills, or one gill (enough) for 20,480 hills. Is it not worth the trouble? Will you not try it on two acres of tobacco this season, and let us know the profit of it?

A man advertises for a competent person to undertake the sale of a new medicine, and adds that "it will prove highly lucrative to the undertaker."

GARDEN WORK.

If the hints given for last month have been attended to, we need but add a few suggestions, and urge a second sowing of most of the sorts of vegetables then advised to be sown, so as to keep up a succession, and also sow later bearing or maturing varieties. The work will become very active as the grass grows apace this month, and the spring started unusually late. When the ground is in good order prepare rich beds for celery seed, pepper, and cabbage for autumn and winter, and sow them at once, with well selected seed. The bed for winter cabbage plants may not be sown before the last of the month. The *Ox-Heart* is fine for autumn; *Savoy*s and Flat Dutch, best for winter. A small bed may be sown with seed of Red Pickling cabbage. Every ten days sow radish seed, and sprinkle over the bed a few lettuce seeds, the plants from which will occupy the bed after the radishes are gone, and will then be far enough apart not to require drawing up, consequently will continue to grow without check.

Culinary Herbs.—The seeds of these may now be sown on a border, that the plants may attain the size of two or three inches in height, and then be set out in July in rows, where they will yield a heavy crop in bloom in October or November.

Salsify.—Sow this month.

Peas.—Sow by the middle of the month, a few rows of the Black-eyed Marrow and Dwarf Marrow, and Champion of England toward the last of it. Of this pea you may sow a large patch, as it is the Champion Pea, not only of England, but of the world.

Cymlings or Summer Squash.—If the weather is suitable, put these in during this month.

Lima Beans.—Plant the poles for Lima beans and other running beans, such as Indian Chief, Black Wax, Pole, &c. After the poles are planted 3x4 feet, put a heavy coat of well rotted stable manure around each pole—over this, chopping in the manure, a moderate sized hill, not over three inches high, and let it stand, ready for the beans early in May.

Cucumbers.—Plant a few dozen hills of these.

Watermelons and Canteloupes.—Lay off the hills for these, 8x10 feet for the former, and 8x5 feet for the latter. Where the lines cross each other, open a hole 8 or 10 inches deep, and fill up with stable manure, barely cover with earth, and let them stand until first of May, when the hills are to be made, by drawing the earth over these heaps of manure, intermixing some of it with the earth, and then levelling off to form a broad, flat hill, three inches high. The earth composing the hill should be well worked, and made fine as for a hot-bed; plant the seeds the first week in May, or the last week in this month. After being planted, spread a gill of th's mixture over the centre of the hill where there are the most seed—4 parts sheep manure, 1 part soot; the manure should have been dried so as to pound up fine and intermix with the soot. Put plenty of seed in a hill, so as to provide against the attack of flies, worms, &c., and as the plants grow they can be thinned, or dibbled into places where wanted.

For the Maryland Farmer.

LIME AND MAGNESIA—MODE OF APPLICATION.

These fertilizers are inseparably mingled in the limestones of the Shenandoah Valley and generally of the United States. Their action in the soil and in the production of plants is analogous.— Their mode of preparation and administration is the same.

Separate consideration of each would be useless, and I shall therefore treat of both together.

Our general remark as to the office of these manures, which may lead the reflecting mind to correct views of their use, and I will proceed to more minute details as to the proper mode of application.

The vegetable kingdom, in the economy of nature, is her laboratory where plants assimilate food from air and the soil, and prepare it for the use and formation of animals, a higher race of creatures, with man at the head.

Animals cannot perfect the growth of their bodies without lime and magnesia. As for instance, more than half the composition of bones is phosphate of lime and of magnesia. To form 100 lbs. of lime, there must be incorporated with their substance about

55 lbs.,	of phosphate of lime,
4 "	carbonate of lime,
3 "	phosphate of magnesia.

To obtain this, an animal cannot digest the lime and magnesia of these compounds until taken into the body of plants and there prepared for animal food. In this condition they furnish direct food to herbivorous animals, as the ox, the horse and the like, and to man. And the flesh of these animals furnishes food to the carnivorous order of animals and to man, who assimilates both vegetable and animal substances.

Nor can the plants appropriate lime and magnesia directly from the rocks or from the soil in lumps or in even the finest powder. But only in a state of solution usually combined with other plant food in water.

Unavailable to plants in their solid uncombined state, they must be carefully and thoroughly intermingled with the soil in the finest state of subdivision possible, that they may readily dissolve and enter into combination with other plant food, and in solution be everywhere at hand to be absorbed by the rootlets of plants. Plants have no stomach to digest solids and take their food only in a state of solution.

Mineral food must, therefore, be presented in solution; otherwise it is no more available than the solid rock or the diamond.

The diamond is the purest form of solid carbon, and is the only perfectly pure form in which it occurs in nature. Carbon is one of the chief constituents of plants and animals. Yet in its purest form no plant or animal can assimilate it. Heated in the open air to redness, it will decompose and be converted into carbonic acid gas, in which condition it may be absorbed by the leaves of plants, where it undergoes decomposition and the carbon of the gas, or what is necessary, may be assimilated into the plant, while the oxygen is exhaled. Hence, although carbon is a constituent element of all the solids and fluids of animal bodies, no sane person would attempt its administration as food to plants or animals in the form of diamond or the less expensive form of charcoal or lamp black in a solid uncombined state.

And the same reasons that direct us in this, should guide us to the certain conclusion that we must administer lime and magnesia under such circumstances as that the plants may appropriate them.

In order to success a farmer need not be a scientist, but he ought and must understand some of the first principles that govern the growth of plants he propagates. He should understand that plants feed not on the soil as such, but only extract the plant food held by the soil in solution.

If furnished with the same food dissolved in water in a glass vessel, under the same conditions of light and heat, they would grow in the medium of water as in the soil.

The first error of opinion and practice of the farmers of the Shenandoah Valley, I shall notice, is the piling of unslaked lime and the magnesia in it in lumps and heaps over the field. They do this for various reasons apparent to them. One of which is that they lose their caustic properties on slaking. A sufficient answer to this would be that thus slaked, or rather drenched, on the field, it must lose as much of its causticity as if slaked any where else before incorporation with the soil, or even spread on the surface; without any diversity in its action from that of slaked lime, except that the heat generated under the heaps, in the process of slaking on the land, might destroy the plants, and that thus drenched with rains it never falls into powder but forms hard granular lumps. And except for very sour boggy lands the mild limes are equally efficacious, and even these are reclaimed by the marls and shell sands which never were caustic.

But if a man will rush the lime shells or "stone lime" on the soil in that state to preserve their causticity, he does a foolish thing. For if we admit that causticity is desirable there is certainly no

danger of its loss by properly slaking the lime under cover into fine powder to be evenly distributed, for merely in contact with air and water it has never been known to lose its causticity. It is true, *in the soil*, lime and magnesia enter into solution and combination with acids and other substances and pass through continual rounds of transformations; and during these changes they lose their causticity. But out of the soil, as the lime in the mortar of ancient walls, they have not been known to return to the mild state of carbonate in the lapse of centuries.

The mortar in Roman walls built 1800 years ago, has in all that time absorbed only three-fourths of the quantity of carbonic acid contained in the original limestone; one-fourth remaining still in the state of caustic hydrate. And in the mortar of walls 600 years old, the lime has absorbed only one-fourth the carbonic acid necessary to bring it to the state of uncaustic carbonate.

Magnesia absorbs carbonic acid more slowly yet than lime, and after calcining never returns to the mild state by exposure to the atmosphere.

Lime and magnesia are hurried on the soil in lumps and piles for fear of losing their causticity, when if it would ever be lost, over two thousand years would be required to accomplish it.

But waiving further consideration of special errors, I proceed to a more general view of the subject; and herein of the effects to be produced by lime and magnesia; the objects of their use, and their mode of action. A proper understanding of these will leave no diversity of opinion as to the proper condition and mode of application; about which it is idle to speculate without such knowledge.

As a manure, the lime in the marls or shell sands or limestone sands, in the purely mild state, produce the same effects in kind, and ultimately the same in degree, as the burned lime from the kiln.

And were it possible by mechanical means to reduce the limestone rocks to the same fineness, the same results would follow its use.

Prof. Johnston (Ag. Chemistry,) says "if different varieties produce unlike effects, it is because in nature lime is always more or less mixed with other substances, which modify the effects that pure lime would produce." "The special effects of marls, &c., where they differ from those of burned lime are to be ascribed to the presence of such admixtures." In general the chemical action of the marls and calcareous sands is precisely the same, in kind, as that of lime in the burned state, and the effects produced by marls represent the general effects of lime in any form. (Johnston's Ag. Chem.)

The material question is not, therefore, whether

it be slaked or unslaked, caustic or mild; or lime of bones or other animal remains, or lime of the marls or shell sands; or new, or old, but simply whether it is in as minute a state of subdivision as possible.

If it be in impalpable fineness, it matters not whether it was brought to this state yesterday or six thousand years ago, or by what means, whether by burning or disintegration of rocks or shells by mechanical means.

Burned lime, slaked in shallow pits covered with sods to shield it from the rains, as they practice in England, is made finer than by any mechanical agency. Hence it is diffusible more uniformly through the soil, and the effects of a smaller quantity are equal to a much larger in a coarser state. The impalpable condition promotes in a wonderful degree the chemical action and availability of lime and magnesia as plant food.

In all cases chemical action takes place between exceedingly minute particles of matter, and among solid substances the finer the powder to which they are reduced the more vigorous their action.

By mere mechanical division the apparent action of the oxygen of the air is augmented and hastened in a wonderful degree. By *chemical* means metals may be reduced to an impalpable powder which will take fire by simple exposure to the air and burn into oxide. Lime and magnesia acting and being acted on only by their surfaces in contact with decaying matter in the soil, a similar result follows when lime in an *impalpable* state comes into contact with the vegetable substance upon which it is intended to act.

Prof. Johnston, while he proves by the examples already referred to that lime does not lose its causticity by mere exposure to air and moisture, seems to suppose that caustic lime in one or two years *mingled in the soil* will combine with carbonic or some other acid of organic origin, and remarks that "this result will be reached in one or two years, while the beneficial action of the lime itself may be perceptible for 20 or 30 years." "Hence," continues Prof. Johnston, "there is much apparent ground for the opinion of Lord Karnes, 'that lime is as efficacious in its (so called) effects, as in its caustic state.' Even the more strongly expressed opinion of the same acute observer that 'lime produces little effect upon vegetables until it becomes effete,' derives much support from experience, since lime is known to have comparatively little effect upon the productiveness of the land till one or two years after its application. And this period in most localities deprives even slaked lime of all its caustic properties."

The same learned author also tells us that all the

effects produced by alkaline matter, whether by lime or by potash in the caustic state, are produced in kind also by the same substances in the state of carbonate; their carbonic acid is displaced by almost every other acid compound produced in the soil; and with this displacement is connected a series of changes converting organic matter in the soil, with the exception of its nitrogen, into carbonic acid and water. Acid substances are being constantly produced with which the carbonate of lime combines, giving off its acid, producing a continued evolution of carbonic acid.

The *disposing* influence of lime, (as the chemists call it,) whether caustic or mild, facilitates the decomposition of organic matter, and the acids produced by the continual oxidation combine again with the lime, liberating its carbonic acid as food for plants.

Lime, whether caustic or mild, acts on the mineral matter of the soil, decomposing the sulphates of iron, magnesia and alumina. After liming soils containing these salts it is useless to add plaster, because the lime, *whether mild or caustic*, has decomposed the sulphates and formed abundance of sulphate of lime.

Lime aids in the liberation of potash and soda from their combination with silica in barnyard manure—the alkali is freed—the lime combining with the silica.

The condition of impalpable powder is equally essential to the mechanical effects of lime on the soil. "In this state," says Prof. Johnston, "it stiffens very loose soils and opens stiff clays."

Upon the principle already adverted to, of the action of lime by the surfaces of its particles, it has been estimated that 20 bushels of our fine lime is equal in its effects to 100 bushels of lime from the coarser English chalks. By the usual mode of application in this Valley this disadvantage is waived, and five times the quantity of our superior limes are required to produce equal results with the English limes. Our farmers take great pains to put it on the soil in lumps and heaps, so as to have it chilled into hard granular lumps; while the English farmers take every precaution to slash it finely in shallow pits covered with sods. They reap its benefits the first, second and third years, and on to the twentieth or thirtieth year; we, after the lapse of five, ten or fifteen years, and only then by a prodigal application.

Prof. Johnston says "if water be applied so rapidly or in such quantity as to chill the unslaked lime, or any part of it, the powder will be gritty, will contain many little lumps which refuse to slake, and will also be less bulky and less minutely

divided, and therefore less fitted for agricultural or building purposes."

Yet that is the very thing our farmers think they must accomplish to perfection, and in order to thus chill it into granular lumps, they hasten it out on the fields where the rains may fully accomplish the destructive purpose.

And why? Simply to prevent the loss of its alkaline properties, which by mere exposure to air would not be lost in two thousand years. From the best authorities it may be deduced that, generally, lime in the mild, is as efficacious as in the caustic state, with the only possible exception of extremely acid boggy soils, where the caustic lime *may* act more vigorously, producing more immediate apparent results; the same ultimate effects following its application even to these soils in the mildest state, as in the marls, &c. In whatever state it enters the soil it is mild after one or two years; chemical action with substances in the soil depriving it of causticity.

By mere exposure to the air it is never converted from caustic to mild lime. Caustic lime is wholly unfit for plant food and must be reduced to the mild state before the plants can assimilate it. It should always be reduced to the minutest possible state of subdivision before placing it on or in the soil, and in case of lime burned from the rocks it can be reduced to this fineness only by protecting it from hard rains until it falls to powder. When applied before slaking in large lumps of lime shells, (stone-lime) to sour clay soils, it is chilled by the rains into hard granular unslakable lumps, which, for the most part, will become coated over with fine clay, and rendered impervious to air and water, and never will become available for any useful purpose, remaining inert as stones, until crushed by mechanical means. All these propositions apply with equal force to magnesia.

VALLEY FARMER.

[TO BE CONTINUED.]

TO PROTECT LEATHER FROM THE ACTION OF AMMONIA IN STABLES.—Long continued observations show that harness and other leather exposed to the action of ammonia continually given off in stables become weak and rotten sooner than other leather. Even when care is taken to protect them with grease this takes place. Prof. Artus recommends the addition of a small quantity of glycerine to the oil or fat employed in greasing such kind of leather, asserting that it keeps it always pliable and soft.

ORCHARD AND HERDS GRASS.—Orchard grass is very light and chaffy, and when sown alone not less than two bushels is required. Of Herds grass, one bushel per acre. If mixed, half these quantities—and so when sown with clover or timothy.

LETTER FRON MR. DUNK HIMSELF.

ON CUT WOOD AND BONES.

NUMBER TWO.

Mister Editors :—As you was kind enouf to publish mi last letter, I will send you another on the same subject of sum ov the Joodge's way ov farmin'. In that last letter he writ you 'bout me and mi ways he said I hadn't no wood pile ov cut and seasoned wood for immegit use ; no more I hadn't, nor don't mean to. Anybody but him knows that the more you cut up the more you may for the wimmen folks jes sit and talk and keep a puttin' on another stick without enny judgment about how much labor we men folks take in the cutting, hauling an choppin' ov it ; then ef you've got a lot cut up ahead, tha won't burn up the chips ; but jes cut a little at a time, make out sometimes you've got a hurried job on hand and put out, make 'em cut a little onct in a while and they'll be mity keeful ov it and pick up all the chips too ; it makes a wood pile look so clean. Agin, a stick ov seasoned wood don't last no time ; you put it on a fire and in a minute or two its gone, when a rale green old water soaked black oak'll last a powerful while. The Joodge 'lows that seasoned wood will go furdur than green wood ; I'd like to know which will last the longest, a good green log or the same log seasoned and whittled up into shavins ; its jes the same to whittle it into shavins fur then you know it will git thoroughly seasoned, and his idea is the more its seasoned the better, and again everybody knows varmint'll git into a wood pile when you've got sich big heaps of it in one place. I went over to his place and seen wood enough piled up cut and uncut, amost to burn a lime kill, an two rabbits pinte ahed ov me and got under the wood pile ; snakes too will do it an groun' squerrel and every other critter that seems born jes to make it harder fur human folks to git a livin', and thats a nice situation for a man to be in to keep a menagery roun' his house. Rabbits is a bitin', destroyin' thing roun' trees and cabbage patches and I don't want 'em roun' me, leastwise them the sentiments of people about yer that knowed all about farmin' 'for he could teach 'em, altho' I see bi his experimens he's leedin' sum astray from the old time way, besides its so handy to hav' a wood pile you can set a hand at in odd spells insted ov doin' nothin' ; you git menny a lick out ov 'em that way.

Now about Jakey and the share he got down to the Joodge's. We had snow on the ground and good sleighing fur a week, and thinks I ef its goin' to keep on this away I'd better mend up the old slide, so me an Jakey gits to it late one evenin' and

'for we got fur found we'd have to have a handsaw and a few other tools, an I sent Jakey down to his house fur them while I stepped up to the Codge fur a few things. (I despise wot he says I git up there ; leastwise, *he* don't have to pay fur it.) Comin' back I went towards his house to help Jakey carry the things, when what should I see but him a rushin' out ov the barn, down the hill az fast az his legs could carry im, across the pig lot, through the cabbage patch, over the bridge an' rite by me full split without sayin' a word. "Whats the matter Jakey?" said I, "they're after me," sez he, an kep on towards hum, fur did'nt kno' his own father. I follered on an after a while cum to find out the particulars, the Joodge he'd sent 'im to git the tools up to his shop in the back part of his barn where he had stowed away a lot of barrels full ov ole hoss heads, pig heads, sheep bones, cow legs an all sich stuff, what he sets the boys roun' the country to gather up fur 'im, and when Jakey got in there it was putty dark an' he see the white shinin' things ahed ov im an' then stumbled an' pitched ontu them an they bein' piled up high got to rollin' towards im on a ole board that was stuck up there an it skeert im, an' when they kep a comin' he went tu work to pile distance atween him an' them. When I heerd all this, Mistur Editur, I *was* wroth ; sez I, I won't stan' this, an nex' mornin' I pinte fur the Joodges. I heerd about how he'd been bragging on what a heavenly temper he allers kep in debatin' these things and thinks I, I'll rile you this time ef there's enny mud to work on.

He was out in the woods puttin' on a log—he's always a buildin' sum foolish thing—an' I began to him ; I ripped an rared and swore an cussed an he jes sed nothing, and the more he did'nt say nothin the madder I got ; sez I : "you call yourself a christin and murder your nabors children ded on the spot wen they cum to borry a tool in that manner." By this time he got the log on an sez he ; "ef that killed him he was the livliest corpse ever I seen, tiklarly when he clared the kabbidge patch," and with that they all set tu a laffin, an then he got ontu the saddle horse and sez he, "I'll drive up as fur az the house ; Mr. Dunk walk up an take a glass o' cider ; I've jes broached a new barrel an its rale elegant," an crack went hiz whip and wot with hollering and rabberin' an scratchin' of the team I could'nt git another word in and as I had'nt bin to the Codge yet—what I mean iz, as I kum rite down without stoppin' sez I, "I bleeve I will," but I'll show 'em up more about this bone bizness.

Yours hily indignant,

JAKOB DUNK.

Advertising is the true philosopher's stone.

For the Maryland Farmer.

A VARIETY OF STATEMENTS AND SUGGESTIONS ALL IMPORTANT TO THE FARMER.

NUMBER FIVE.

I have just perused with interest some very sound and pertinent remarks in the February number of the *Farmer*, by "*Giardiniere*," under the head of *Bad Farming*. He claims, and very justly, too, that "*too much land for the capital employed upon it*," is the primary cause of many failures in farming.

I would add, and attempting to till and plant a greater area than the farmer has means to do in the best manner.

Now let me entreat those who are so unfortunate as to be possessed of the disproportion of land and capital, as claimed by G. at this seasonable period, before they have embarked in the ruinous, long practiced course of *plowing much* and *harvesting little*, to inaugurate a new system, one that has in every instance that has come under the notice of the writer, proved so satisfactory, that nothing could induce those who have practically tested it, to return to that to which so many worthy, deserving knights of the *plow* can unmistakably trace their financial ruin.

If I can only prevail on one or two in each neighborhood, where the erroneous, ruinous practice of skimming over *acres*, instead of tilling well, and manuring well *roads*, I shall feel well repaid for the "midnight oil" consumed in urging the test of the system which I can so confidently recommend.

Make the calculation as nearly as practicable, how much land for each crop to be planted, you have the time and force to plow and till in the most thorough manner, to have it all ready to plant as early as it should be to secure the maximum growing season; and the area that you have the facilities and means to fertilize liberally, and to till during the period of growth just as it should be tilled to promote development, and mature seasonably a full crop. Then let the result of your calculations or estimates of your ability and means arbitrarily control the extent of your cropping operations for one year, and I have not a fear but that your net profit will be greater than that ever realized under the old system; besides, you will have pleasure in your labors, instead of the annoyances, misgivings, losses and discouragements that have hitherto harrassed you from beginning to end of every year, under the old system of plowing and planting too much.

The number of the class who have long been the

devotees of this ruinous system, in this country, is legion; and whilst I heartily sympathize with them, bound down as they are into the deep cut ruts, that generation after generation have successively been deepening, I am determined to fire my steel (pen) at them, until I break the ranks, force them to surrender to my appeals, and adopt the course that I recommend.

I take courage, and the more boldly brandish my weapon in each successive attack, when I retrospect the victories already won alone, on my favorite, blue lined battle-field, on which I depend on seductive rather than destructive forces.

Were it not that I fear I should be accused of boasting, I would give the names of some very creditable conversions from the old system to the new, that I have made through the agency of my timely bi-pointed steel.

"TOO MANY EGGS IN ONE BASKET,"

The prudent of all ages have condemned, and yet it is as common as iniquity, to see farmers adhere to this principle in their cropping.

One will risk his all on cotton; another on wheat; another on corn; another on hops; another on the dairy, &c., &c., and to this erring course very many useful citizens, and industrious, worthy men, may directly trace their financial ruin.

An extraordinary demand and an inflated price for a season, from any cause, for any agricultural product, begets a general monomania for the culture of the particular product, utterly regardless of the essential requisites of success, a large majority of producers suddenly change their system of production, and embark pell-mell into that of which they are totally ignorant, and as destitute of other requisites, and as a legitimate consequence of such indiscretion they fail, and not unfrequently are utterly ruined for the balance of life.

One would naturally conclude that such signal failures, and such disastrous results, would never be lost sight of by all others in the same vocation; that none would be so reckless as to venture out of their legitimate course, lest they too would share a similar sad fate; but this is the experience of the discreet observer, for he sees every year, and in almost every neighborhood, a repetition of a similar fatal folly.

SUCCESS IN VARIED PRODUCTION,

Judiciously and intelligently pursued, is found to be the rule, and failure the exception, yet how few farmers have learned this important and well established principle in husbandry.

Whilst I am continually finding fault, I am at the same time disposed to be charitable.

Under the influence of this exalted virtue, I must

admit that there is more than one well grounded excuse for many, who so tenaciously adhere to the production of a single crop, to the exclusion of the variety that would be so much more remunerative.

They have not had the advantage of being educated to any but the one system to which they and their ancestors for generations have been solely devoted, hence they cannot, they dare not, digress, for fear of getting beyond wading depth, and sinking to rise no more.

Had the farmer who is simply a cotton grower, or a wheat grower, or a corn grower, and nothing else, enjoyed such advantages as may now be enjoyed at the Maryland State Agricultural College, according to the statement of one of its faculty, Mr. N. B. Worthington, in an article published in the February number of the *Maryland Farmer*, in which he says, "*we claim to give to the farmers' sons of the State, at a very low cost, a course of instruction in all that a good citizen and farmer ought to learn,*" why then they could readily and safely change their system of production at any time—with such a thorough training, and such unlimited advantages as the Maryland College is now prepared to give to its graduates, they are prepared to locate in any latitude, on any variety of soil, and under any of the diversity of circumstances or surroundings, and they are equal to any emergency.

How striking and how desirable for one who purposes to devote his life to husbandry, are the advantages that are now enjoyed at the College.—It is not strange that the number of the pupils at the College is large, and only limited by the means for accommodation which Mr. W. states are now "almost" exhausted. When the peculiar advantages of the College for the education of farmers is more generally understood, I am sure that it will be found necessary to enlarge the accommodations. It is evident that some farmers, at least, are at last awakened to the importance of that class of education that is now to be obtained at the College.

I find in the March number of the *Maryland Farmer* an article from a veteran farmer of Kent, (county, Md., I infer, as he signs "Kent,") who seems to be delighted with the official report and description of the College.

He speaks of "renting out his farm, and placing himself under instruction for a few years," he is so much pleased with the thoroughness of the course.

The man of three-score years, as Kent says he is, would probably find the "*military drill*" and "*gymnastics*" rather severe on him, and it is not probable that he would be able to carry his row at heavy field labor, by the side of the well developed blades, such as the thorough College course in the field is likely to produce.

I cannot conclude without calling the attention of the farmers of Maryland to the very prosperous condition of their College, and urging upon them the duty they owe to their sons in giving them the great advantages now to be had "*at very low cost.*"

"A word to the wise is sufficient,"—and I fully confide in the yeomanry of Maryland, and in their sagacity and appreciation, and I am sure they will not allow the golden opportunity pass unimproved for giving their sons instruction cheap "*in all they ought to learn.*"

J. WILKINSON,

*Landscape Gardener, Rural Architect, and
Consulting Agriculturist, Baltimore.*

POTASH IN DIFFERENT KINDS OF ASHES.

A correspondent of the *Country Gentleman* gives the following table, showing the amount of potash contained in 1,000 pounds of ashes, made from burning different kinds of wood:

	$\frac{1}{2}$ pounds.
Pine.....	$\frac{3}{4}$ "
Poplar.....	$\frac{1}{4}$ "
Beech.....	$1\frac{1}{2}$ "
Maple.....	4 "
Wheat Straw.....	4 "
Corn Stalks.....	17 "
Oak Leaves.....	24 "
Stems of Potatoes.....	55 "
Worm Wood.....	73 "
Sunflower Stalks.....	19 "
Oak.....	$2\frac{1}{4}$ "
Beech Bark.....	6 "

The remaining portion of the ash, consisting of carbonate and phosphate of lime, iron manganese, alumina and silica, is an excellent fertilizer.

TRANSPLANTING IN THE NIGHT.

A gentleman, says the *Western Ruralist*, anxious to ascertain the effect of transplanting at night, instead of by day, made an experiment with the following results:

He transplanted ten cherry trees while in bloom, commencing at four o'clock in the afternoon, planting one each hour until one o'clock in the morning. Those transplanted during the daylight shed their blossoms, producing little or no fruit, while those planted in the dark maintained their condition fully. He did the same with ten dwarf trees, after the fruit was one-third grown. Those transplanted during the day shed their fruit; those transplanted during the night perfected their crop, and showed no injury from having been removed. With each of these trees he removed some earth with the roots. The incident is fully vouched for; and if a few more similar experiments produce a like result, it will be a strong argument to horticulturists, etc., to do such work at night.

"Fodder, dear fodder," come home with me now, is a corn-stock variety indulged in by burglarious cattle. It is their battle cry as they valiantly charge upon the neighbors' fences.

For the Maryland Farmer.

TO YOUNG FARMERS.—No. XVI.

MELLOW GROUND—LIME—SALT—PLASTER—FRUIT TREES—DEEP PLOWING—UNDERDRAINING.

If you would demonstrate the fact that deeply plowed, mellow land is the best to stand *drouth*, and also to prevent bad effects of *too much rain* and wet, you can do it very easily in this way:

Take an old keg or box, with holes in the bottom, and place it in another larger vessel, that will hold water; then fill the smaller one with twelve or fifteen inches of fine, mellow earth; then pour a quantity of water in the larger or outside vessel, several inches deep, and watch how gradually the water will rise up toward the top of the smaller vessel, through the loose earth, even higher than it is in the outside, if they stand in the sun where the earth can get warm, as it does in the fields during a warm season; and you may wonder at this, but it is not strange or unnatural, but is in accordance with the laws of nature, both from capillary attraction, and because the water seeks the warm temperature from a disposition or tendency to establish equilibrium, both of temperature and moisture.

Now, remove the loose earth, and put three or four inches of hard, tenacious earth in the bottom of the small vessel, with loose earth on top, which water cannot penetrate or pass through; then put it, as before, into the larger vessel, and notice how slowly, or not at all, the water rises toward the surface or into the few inches of fine soil on top of the hard earth in the bottom of your small vessel—impervious to water.

Now, these two experiments show how your land is operated upon in time of drouth. If your ground be *plowed deeply* and finely, the moisture will continue to rise freely from below, while the hot days and months continue, which otherwise cause the evils of drouth; but if you have shallow plowing and hard-pan below, the water cannot rise, and the surface-soil will become dry, hard and sterile, so that your plants will not thrive. Hence, *deep plowing* and *underdraining* are preventives of drouth, and will secure good crops.

Again: reverse these experiments. Instead of pouring the water into the outside vessel put it on top of the inner vessel, full of loose soil, and notice how readily the water will run through and pass off, so as not to drown out your plants, and thus avoid the evils of too much water or rain, which makes the soil too cold and barren for plants to grow.

Now, take the case of your pot with the hard-pan or stiff subsoil, and see how the upper soil is soaked and soddened with the surplus water, so that plants

are chilled and dwarfed into a sickly growth—or even killed.

And now, by these simple experiments, you have proved that by deep plowing and thorough drainage, you can prevent the injury of both surplus water and drouth; while, also, your lands and fields are in more pleasant condition to cultivate, and your labor is done in more comfort, and with more ease, than when wet or dry; try it.

The present is a good time to spread *lime* on your wheat fields, or to mix it with peat, muck or leaf mold, for the hills and drills of your corn and potato crops, soon to be planted. And it will be beneficial if put around the roots of your fruit trees after scraping away most of the weeds, grass and earth. And all that is here said for the use of lime may be said, and is equally true, of wood ashes, if you have or can get them.

Now is a good time to spread *salt* on your wheat fields and meadows, or mixed with fine manure for your garden.

And as soon as the weather is warmer and dryer it will be time to spread *plaster* on your clover fields, and even on your winter wheat. It is a great and greedily absorbent of the gases and moisture, and holds them around the plant for its use as they are needed; this is the use of plaster.

LAND MARK.

For the Maryland Farmer.

TRANSLATIONS AND COMMENTS.

From the French of *La Agricole, Montreal*.

We notice a commendable feature in the conduct of agricultural associations in the written address of the President of the Society of Agriculture of the County of Chambly, Canada, to the members, similar to the address of the President of the United States to Congress. From this address, (a statement of the transactions of the Society for the year 1872, and numerous suggestions and recommendations,) we make the following translations:

PROSPERITY.

"Notwithstanding the considerable disbursements necessary to accomplish the end we had in view, the Society now stands with a surplus in the treasury."

"This year, not satisfied with an exhibition more complete than the preceding, we have taken part in a joint Exposition, in which participated the four agricultural associations of the counties of Laprairie, Vercheres and Chambly."

IMPROVED HORSES.

(It appears that this Society possesses a stallion named Normand, for among the receipts we notice "revenue from Normand, \$582.")

Would not this plan be a good one for State

agricultural societies to adopt? We do not forget the purchase last fall at the State Fair of one of the Walter's Percheron stallions by the Agricultural Society of Kent County, and hope the plan will be generally followed. If we are to have a *general* and speedy improvement of our stock of horses and other animals, it must be done by co-operation.—*Trans.*)

"The stallion Normand is far from being sufficient for the needs of our county. We could readily employ two. The Society would be able to buy it, as the Society of Laprairie has done, by putting out a hundred tickets or more of \$10, payable in installments. We hope the directors will see the necessity of having another stallion imported."

ORNAMENTAL PLANTING.

"An association has been organized in Quebec for the purpose of planting trees. Who would not desire to plant ten ornamental trees every year? It is our duty to embellish our homes, and make our routes attractive. It is our duty to labor in the interest of our posterity in increasing the value of our property by useful and agreeable plantings. Let us immediately and every year make this slight improvement, and immense results will follow our perseverance."

HARD ROADS.

"The Government has concluded, at the request of the Council of Agriculture, to put at the disposition of stone companies, the best machines for breaking stones known. The following is the resolution of the Council:

"Whereas, the stoning of roads is absolutely necessary to secure the progress of agriculture in the province of Quebec,

"Resolved, that the Council respectfully prays the Government, hoping it will be able to aid this enterprise directly, to secure the passage of a measure which will authorize it to buy the best stone-breaker known, and to put the same at the disposition of companies for the purpose of stoning the roads, in accordance with such conditions as the Government shall judge necessary for the preservation of the machine, and to re-imburse itself for its advances."

"It now appears certain that the Government will give gratis the use of these machines to the companies, who will exact no toll on their roads. We greatly congratulate the Government upon taking this means of stoning the roads of the Province, and we request the citizens of the county to organize themselves immediately into companies, to secure the use of one of these machines."

MANURE.

"The committee hopes that the future directors will offer prizes to those who take most care of their manure, who produce the most, make composts, have drains to catch liquids, and who use judiciously lime, plaster, &c."

(If Maryland and the Southern States could adopt these features, with a successful immigration policy, in a few years their waste places would be arrayed in all the colors of the year the garden offers, or flushed with the splendors of dewy meadow and ripening harvest-fields.—*Trans.*)

A LARGE YIELD OF CORN.

The committee appointed by the Carroll County Agricultural Society to give a premium to the gentleman growing the best acre of corn in Carroll county, awarded the premium, \$100, to Mr. Wm. J. Brown, of Baltimore county. Mr. Brown addressed a letter to Col. Wm. A. McKellip, the Secretary, in which he says:

"I send you a report of the way in which the ground was prepared for the premium acre of corn. The acre was selected from that portion of my father's farm that lies in Carroll county, which he cleared in 1848 of its timber, and has been cropping it ever since, with the exception of the last three years, and then it was seeded down to timothy; mowed the first and second years, and pastured, and the third year it was in grain. Last spring it was liberally manured with horse manure, one-half plowed down and the other half harrowed in and rolled, with bone and other fertilizers sown broadcast; it was then harrowed again and rows marked out $3\frac{1}{2}$ feet apart. Then a compost that had been made of hog and hen manure, ashes, two bushels of salt and a barrel of plaster, was scattered along in the furrow, and the corn dropped about six inches apart, and covered about two inches thick with a fork. The corn was planted on the 10th day of May, and owing to the ground being plowed too wet, and not harrowed until the sun had baked it into clods, it could not be made into that fine tilth so desirable for a quick growth, and in consequence of the drouth it came up badly and was replanted; this also failed to come up, and I concluded to run a furrow between the others. In the furrows a sack of guano was scattered, and the corn planted as in the first instance. It also came up badly, replanted until June, and then there were many places in the rows without a stalk of corn for a distance of several feet. The corn was harrowed over every few days with Thomas' Smoothing Harrow, until about a foot high, then plowed over twice with a single shovel plow, at an interval of about one week, and as it was very clean it remained in that condition until manured. After the corn got fairly started the drouth had little or no effect upon it. The corn was not thinned, it was very thick, and many remarked that it would fire. But owing to the deep plowing, deep subsoiling, (the subsoil a clay bottom,) ample manure and fertilizers, the corn did not fire, but yielded by very careful measurement, both of corn and ground, twenty-four barrels and one-half bushel, and of fodder, part weighed in December when quite dry, and the bundles counted and averaged, there was 9,880 pounds. There was applied to $1\frac{1}{2}$ acres of land 500 lbs. of bone dust, and about 1,000 lbs. of bought fertilizers, from this part of the field the acre was selected. The corn is of the large yellow variety, very thick ear, deep grain, length of ears from six to twelve inches, and with the exception of about $1\frac{1}{2}$ barrels of the shortest that was fed to fattening hogs, can be seen at any time in my father's corn crib. It is a good lot of corn filled out to the very end of the cob. Alongside of this acre, which was surveyed by John M. Wheeler, is another acre that was carefully measured, both land and corn, and yielded, without fertilizers, except a coating of horse manure plowed under, 17 barrels and 6 bus. This acre was planted $3\frac{1}{2}$ x 3 feet, and two stalks in a hill."

Clippings & Comments.

BY THE EDITORS.

PRESERVATION OF GRAIN.

Our French correspondent from New York, sends us the following interesting article on the preservation of grain, by Professor Joseph Luce, read before the St. Louis Farmer's Club :

Some time ago a scientific paper mentioned a new and interesting process for the preservation of grain in vacuo. At first sight this idea seemed an excellent one, but upon further investigation we are convinced that by the high cost of the fixtures, pumps, engine and boiler, the farmers and merchants would not be able to apply such a process without great loss of money.

However, the preservation of grain is of too great importance not to attract the attention of every friend of agriculture, and in hopes of benefiting farmers and merchants, we give the following description of a new process of preservation by carbonic acid.

In a closed building, one, two or three stories high, you place on the floor next to the roof one wooden tub, four feet high by three feet diameter. Each floor is to be perforated on opposite sides by holes, which will open a communication with the lower stories. This done, and the wheat spread on the floors of the stories, you mix in the tub the chemicals producing by their reaction the carbonic acid. These chemicals are the cheapest, and require no auxiliary help of heat or machinery for generating carbonic acid. They are common carbonate of lime and hydrochloric acid. In winter or in summer, in cold or warm weather, the production and the properties of this gas are not altered. Its properties are characteristic, colorless, and much heavier than the air; its specific gravity is 1.53. Diluted in large quantities with the air, it is a narcotic poison for any kind of animal life. It is not combustible, and immediately extinguishes other bodies in a state of ignition. Our process is based upon these properties.

The wheat being spread several feet thick on the perforated floor above mentioned, and the chemicals being mixed in the tub placed next to the roof, the generated carbonic acid flows down the sides of the tub and spreads all around in heavy transparent clouds, penetrating the wheat and expelling the air, as it goes, until it reaches the holes in the floor; then it runs down upon the lower story, and producing the same effect as above, it removes the air from the room.

The building, being closed, will be filled in a short time by carbonic acid.

All insect life will be destroyed, and the solution of one part of the carbonic acid gas in the water will avoid the fermentation of the moistened grain when in contact with the atmospheric air.

The cost of chemicals for the preservation of ten thousand bushels of wheat or corn, would not exceed two to three dollars for four to six months.

FORMULA FOR A VALUABLE FERTILIZER.

From same source, we received the following

formula prepared by J. Luce, Professor of Chemistry.

Prof. Joseph Luce, chemist, reported the following formula for a valuable fertilizer :

The best proportions to be employed are : fresh blood 88 pounds, saw-dust 12 pounds. These are to be mixed and dried in large tanks and stirred during the operation, which lasts ten to twelve hours. To these add plaster of paris twenty pounds. The whole is to be crushed and put in barrels. This composition may be spread on the soil by the farmer in the beginning of spring.

WHEAT CROP OF 1872.

The October crop report sums up the yield of wheat this year at 240,000,000 bushels. The crop is larger and of a better average quality than last year. In most of the Eastern States there is a decrease which, however, is much more than made up by the increase in the West. The average is estimated at 20,000,000 acres, and the average yield at from twelve to thirteen bushels per acre.

THE TEMPERATURE TO GERMINATE SEEDS.

Seeds of hardy flowering plants require a temperature in the soil of about 50 degrees or 60 degrees to germinate well, and tender plants 75 degrees and upwards. These facts should be borne in mind by those who would succeed with annual flowers, and the seeds be sown at corresponding periods in spring.

AREA OF THE TERRITORIES.

The eleven Territories, as accurately as can be ascertained, contain over one billion and a quarter acres, exceeding by nearly two hundred square miles the aggregate Territory of all the present States in the Union. The Territory of Alaska, containing 369,520,600 - acres is including in the number of acres stated.

REFUSE OF TANNERIES.—A correspondent in Monroe county, Pa., writes the *Country Gentleman*, as follows :

We use much of it here, and consider it a valuable fertilizer. We pay \$1 to \$1.25 per ton for it, and haul sometimes two or three miles. Our land is what is called heavy soil, although I have seen it used with good results on the "sandy flats" along the streams. We haul and spread from the wagon, four or five tons to the acre. It is generally applied on the plowed ground, and worked in by cross-plowing and harrowing. It does best on new land, when sown to clover, yielding heavy crops, and the opinion here is that lands treated with this manure keep in grass longer than with any other manure which can be applied.

MILK TO A POUND OF BUTTER.—Mr. Mackie writes George E. Waring, that 13 Jersey cows from the 13th to the 20th of October last, (7 days,) gave 1,631 pounds of milk; average per cow per day, 17.92 pounds; from which was made 80½ pounds of butter, or one pound of butter to 18.22 pounds of milk; each cow yielding 6½ pounds per week. Milk set in shallow pans. Cows at pasture, with no feed but grass.

SOD LAND.

Every observing farmer has noted, while plowing, the difference in texture of sod land and stubble or bare earth. Old sod has a peculiar mellowness, a peculiar grain, extremely fine, loamy, but not pasty. Stubble, or a thin grass lay, turns up in coarser particles, sometimes as large as shot, and commonly the size of a clover seed, but without that requisite pliability common to sod, and which is the proper condition for grain lands. This mellowness is brought about by the grass itself; the slender, constantly-branching rootlets pierce the earth in all directions, reducing the stiffness and preparing the soil for the crops that are to follow.

The best condition of sod land is where the grasses occupy the whole space to the entire exclusion of weeds. This gives us the entire profit of the land. It also only needs to be turned under and the surface well leveled to be in condition for the spring grain crop; and on such sod only can we grow it with certainty. The neglected sod, wholly overrun with strong, vigorous weeds, requires a season's cultivation to subdue the weedy growth, which covers the surface at once. This very unprofitable sod we devote to corn or other hoed crops as a necessity; had the sod been clean we could have taken our choice of crops. If we do risk a grain crop on it the weeds will show through the whole rotation, unless we bring in a hoed crop before the next seeding. The hoed crop should therefore come first on foul sod. All soils do not naturally produce a heavy grass growth; the natural grain lands are natural grass lands generally speaking. A porous, not wet, corn loam brings a thrifty growth; if limestone predominates then all the more sweetness to the fodder, green or cured. Drift land produces a rank growth, but lacking that fine aroma and sweetness so characteristic of limestone grazing lands. On such soil but little stimulus is needed, the principal care being to keep a clean growth. But our light, shallow, lean land, which often has a perverse habit of growing neither weeds or grain, needs assistance. Such soil, if neglected, acquires a density or impenetrability which, together with our drying winds, is fatal to a thrifty growth. After we have obtained a tolerable fineness of the surface-soil we are to sow clover as the principal seed, then a frequent top-dressing of clover manure will start the growth, and act as a mulch until the clover gets a density sufficient to shade the surface. The tendency of the soil to bake and harden will now be overcome effectually. A simple rotation of grass and clover for a course of years will fetch the land into condition for other crops. We are not to expect an increase of fertility in this poor soil sufficient to warrant a good corn crop; the crop to be put on is one that draws tightly on the soil, and we are to return to the grass and clover rotation at frequent intervals.—FRANK GRAVES in *Germanstown Telegraph*.

—Always give the name of your Post Office and State at the heading of your letter, and in legible characters.

LAYING OUT TRACKS.

As the season approaches when Associations and individuals may desire to lay off and prepare Tracks, for exercising their horses, or for races, we give the following method, by which this delicate and generally difficult work can be done with accuracy that is absolutely required, especially when designed as courses for the trials of speed. We are indebted to the "*Turf, Field and Farm*" for these directions, and can assure our readers, they can rely upon the figures given as correct, since the plans were carefully revised by the eminent Civil Engineer, Mr. C. H. Haswell, at the instance of the Editors of that valuable paper:

TO LAY OUT A HALF-MILE TRACK.—Lay off two straight sides, 600 feet each (parallel,) and 452 feet 4 3-8 inches apart, connected at each end with a perfect semicircle (radius 226 feet 2 3-16 inches); place your fence exactly upon a line so formed (which is the inside of your track,) and your track will measure exactly half a mile three feet from the fence; the outside fence to be placed according to the width of the track desired. If not convenient to obtain an engineer to run the curves, it can be done as follows: Place a centre stake midway between the parallel straight sides at each end; take a wire with a loop at the end; loose enough to turn upon the stake, and measure upon this wire 226 feet 2 3-16 inches (the radius of the curves,) which from the centre stake, will exactly reach the ends of the straight lines; then describe your semicircle, beginning at the end of one straight side, putting down a stake every twelve feet, if that is the length of fence panels desired.

TO LAY OUT A FULL MILE TRACK.—Select a level field of forty-two acres; draw through the centre of it a straight line of 440 yards (a quarter of a mile.) On each side of this line, and an exact distance of 140 yards 2 inches from it, draw parallel lines of equal length, so that the space between the two outer lines will be 280 yards 4 inches.—This being done, drive a stake at each end of the centre line; fasten a cord thereto; extend the cord at right angles for 140 yards 2 inches, until it touches the end of the outer line, and then describe with the extreme end of the cord an outer curve or semicircle between the ends of the two outer lines. You will then have a continuous outer line, being exactly a mile (1,760 yards) in length, and requiring an inclosure of forty-six acres of ground. From this outer line or track set the fence of the course three feet in on the straight sides and curves. In this way an exact mile (as near as may be) is preserved for the actual foot track of all the horses. The first distance post is placed 60 yards from the judges' stand; the second at 240 yards, and the start is 60 yards before entering the turn. The track should be graded round the turns like the track of a railroad or circus, the outer portion highest, so that a horse can extend himself at full speed as well around the turns as on the straight sides.

Ridiculous enough. A 200-pound poetess writing verses about what she would do "if she were a sunbeam,"

HORTICULTURAL.

HOW TO RENEW OLD PEACH TREES.

Peach trees of the age of ten and fifteen years in most cases begin to fail. After every heavy crop and after every cold winter there is more or less of dead wood in the trees. If this is taken out every year or two as it should be, the bearing wood remaining will every year be further from the trunk of the tree, and consequently the fruit will be out on the ends of long branches. Every experienced fruit grower must have observed how much inferior peaches so growing are, compared to those growing on a sprout or young branch that may have grown out where a branch was taken off the year previous.

THE REMEDY.

The pruning-knife and a fine tooth saw and a ladder are all the tools necessary. The branches should be sawn off at a distance of from one to five feet from the trunk of the tree. Trees of the age I have named will in most cases have a fine young sprout started from the large branches that should be preserved, and the old branch sawed off three or four inches above the strongest sprout or sprouts.

The pruning-knife should be used to smooth off the surface made by the saw, it being a noted fact that rot begins much sooner on a sawed surface than on a cut surface. The month of January I consider the best season to do it, though the first part of February will do very well; but bear in mind the colder the weather and the more the frost is in the wood the more vigorous will be the new growth the following season. The sap is at that season in the roots. The mild weather of February, especially toward the latter part of the month, starts the sap. Large branches taken off at that time will bleed, and it is a well known fact that the sap is the life of the tree.

There may be old branches where there are no visible sprouts or buds where it is necessary to saw it off. If branches of that kind are sawn off not less than three feet from the trunk off the tree, there will be plenty of dormant buds that will start from it. The question with many will be, the trees are full of buds for an expected crop. If the trees have not yielded a crop the year previous the branches are *very full* of fruit buds, and if you cut off fully one-third of the large branches, the tree will not have all the fruit it can mature properly, and I am satisfied if but one-half was left on in seasons of large crops, the one-half would net more money than all. Besides you will have a young growth for the next year, from which you will gather fruit as good if not better than that grown on

young trees. The trees should have thorough cultivation, and manure of some kind. If the land is light, bone dust, ashes or stable manure can be used on trees of that age without risk of breeding injurious insects. Stable manure applied to young peach trees appears to increase the depredation of the borer. Muck applied alone or mixed with ashes or a little lime is good. How strange thousands of dollars are annually sent out of the State for the many puffed up phosphates, &c., when the very farmers who buy it, perhaps, have thousands of loads of the most valuable of plant food on their farms. I, for one, am not surprised at the cry hard times, money scarce, poverty of the land, &c. Farmers and fruit growers, wake up! It is high time you were up and doing. Fearing I have already taken up too much of your time, I will close. Fruit growers, please give your practical experience.—*Peninsular News and Advertiser.*

LARGE PEARS AND HOW RAISED.

Some of our readers have heard of the magnificent pears raised by Mr. Leighton, of Norfolk, Va. The method of culture, given by him in the Horticulturist, is another proof of the old saying that "from nothing nothing springs," and that pears cannot grow without food. His trees, which are dwarf, are planted 12 ft. apart each way—a little further would be better—in large holes, filled with top-soil mixed with a compost of muck, wood-mould and lime—the two first in about equal parts, and the lime one-twelfth. No crops are allowed to grow in the pear orchard before June, and the surface is kept clean. Strawberries Mr. L. finds to be the most exhausting. He remarks, "Persons who have not courage and disposition to spare the land and keep it thoroughly cultivated, should not embark in the business of pear culture." The holes in which the trees are set, and which are filled with earth and compost, are three feet deep—which is not in accordance with the theory that trees do best when the roots are near the surface. Mr. L. suns up as follows:

In short, the following are requisites for successful pear culture in Eastern Virginia:

1. Perfect drainage.
2. Stiffest clay soil.
3. Proper planting of the trees.
4. Clean culture.
5. Healthy trees (which can be had of responsible nurserymen direct, without the intervention of an agent, and imparting the satisfaction of having every tree true to name.)
6. Timely supply of proper food for growth of both wood and fruit.

7. Determination, patience, and sufficient of the sacrificing spirit to remove all fruit until the tree has sufficient wood to sustain it without checking the wood growth.

8. Judicious pruning (better none than too much.)

9. Careful picking, packing and handling of the packages.

10. The right kind of an agent to dispose of them.

For the Maryland Farmer.

POTOMAC FRUIT GROWERS.

MARCH SESSION.

Society met on Tuesday, March 11th, C. Gillingham, President, in the chair, and Mr. Fulsom, Secretary.

Though the morning was rainy, there was a large attendance, and instructive discussion.

A good display of fruit on the tables—winter apples and pears.

Mr. Kickum, of Georgetown, presented two handsome winter pears, well preserved and of good quality, which he called the "Stull," but which Prof. Saunders thought it was the Buerre d' Arenberg. Maj. J. H. King and others thought it a valuable acquisition to our winter luxuries, and Mr. Kickum offered the members cuttings from the tree; this pear would keep till May.

Judge Gray, of Falls Church, presented five varieties of good winter apples, well preserved, embracing the Winter Tewksberry Blush, Wine Sap, and others.

Prof. Wm. Saunders exhibited a box of fine winter apples, containing four varieties—the Clark's Pearmain, Greening, Vanderveer, and Baldwin, from Greensboro', N. C. The Pearmain was the most juicy, best flavored and most valuable of the lot.

Major King, from committee, made report in favor of a new patented fruit crate, which was spoken well of by members.

The members proceeded to test the fruit on the table; all of them were prized, but the Tewksberry Blush was the favorite. Maj. Hines and Judge Gray made remarks about keeping apples, saying cellars should not be too tight or dry.

In regard to the Carolina apples, Mr. Saunders thought the Pearmain the best, and said that Southern varieties, and trees from the South, were better for Virginia than Northern ones; this was the only way to succeed in getting good winter-keeping apples.

Col. S. E. Chamberlain was of the same opinion and alluded to the fact before us that the Northern

Vanderveer was not a good winter apple for the South.

Mr. Pearsons, Dr. Howland, Mr. Needham, and others, took part in the debate, maintaining that to get good keeping apples in this region, Southern varieties and trees must be grown.

President Gillingham read an interesting paper on *insects* injurious to fruit-growing, which elicited discussion in regard to the honey bee—some maintaining that it is injurious, while others insisted that it is beneficial. Judge Gray recommended sowing the orchards with buckwheat, which feeds bees, fowls and the soil.

Mr. Saunders spoke of the great value and excellence of the *Janinette* pear, as being one of the very best.

The cherry was spoken of as valuable and profitable fruit in this section.

Mr. Saunders said the fig is a good fruit to raise here for the market. He said we could also raise our own ginger, almost as easily as potatoes.

Capt. H. D. Smith spoke of successful fig culture in this city; it succeeds in gardens, with a little care of laying down in cold winters.

Adjourned to meet again on the first Tuesday in April.

D. S. C.

EARLY BEATRICE PEACH.

"According to testimony from the District of Columbia and North Carolina, says the *Rural New Yorker*, this peach is likely to take the lead as an early variety. A North Carolina gentleman has stated that he had a quantity of this variety fully ripe June 15—two weeks ahead of Hale's Early. Who, among our readers, has grown it, and can give testimony concerning it, *pro* or *con*?"

To those interested in this variety of peach we would call attention to the following extract from a communication written for the "*Maryland Farmer*," by one of the leading peach-growers on the Eastern Shore of Maryland. It will be found in full in our November number of 1872:

"In the Beatrice we have the result of his hybridizing his [Mr. Thos. Rivers, of Sawbridgeworth, Herts, England,] very superior Early Silver Peach, with the new White Nectarine, and it is all that the grower can desire in an early peach, being, though rather small, of beautiful color, agreeable flavor, and a sound healthy bearer, and possesses remarkable keeping qualities, ripening, whether with Mr. Rivers, under glass, or in this country, where it has been cultivated, fully two weeks earlier than Hale's Early, which has been hitherto regarded as the earliest peach. He has two other varieties that are second only to the Beatrice, the Early Louise and Early Rivers, both of fine quality, and in ripening follow the Beatrice in the order in which they are named; and both are earlier than Troth's Early, which is usually cultivated as the best early variety. These new varieties of Mr. Rivers' have been imported by some of our enterprising peach-growers, and furnish the lover of this delicious fruit an opportunity to gratify their taste much earlier in the season than they could have done but for the skill and enterprise of this intelligent orchardist of England."

GRAPE CULTURE.

WHEN TO PRUNE GRAPES.

The following we clip from an exchange, who publishes it as from A. Kelley, the noted vintner of Kelley's Island, Ohio, and if from him, is good authority on grape culture :

"At first I supposed that it was improper to trim in spring, when they bleed the worst, the Germans, whom I mostly employed, having a prejudice against it. But sometimes some parts of the vineyard were trimmed at this supposed improper time.

"The closest observation I was able to make discovered no bad result, and I have never seen that it made any difference when the vines were trimmed, from the time the leaves were ripe in the fall, to as late as the 20th of June. I seldom get all my vines trimmed before the first of June.

"Since we have had the rot, I have in some vineyards tried leaving the three canes the full length until August, when, if no rot appeared, I cut off the surplus wood ; but if the rot sets in, I have left the whole vine, and got a larger yield than from vines short pruned. But where there was little or no rot, the shortest pruned vines have uniformly borne the best crops. I am clearly of the opinion that the best time to trim is whenever it is most convenient after the leaf is dead in the fall to the first of June.

"I have always root-pruned pretty severely, plowing deeply close up to the vine, and cutting the roots in the first hoeing in the spring in most of my vineyards ; but I have also tried the reverse, and must confess I have not been able to see much, if any, difference in the results. There are now some seven or eight hundred acres here in bearing. Some persons think that spring trimming is best, but do not claim that they have any facts to prove it. It is true that some parts of vineyards have been trimmed in the fall, and did not bear as well as the part trimmed in the spring, but the reverse is also sometimes true. It is quite common to have one part of a vineyard do better than another one year, and the case reversed another year."

Severe pruning of grape-vines is being generally adopted in this country, says the *German-ton Telegraph*, by those who go into grape-raising and wine-making as a business. In the grape-growing districts of Europe the vines are seldom allowed to stand in the spring more than three and a half to four feet in height, single and tied to a stake.—Summer pruning is then rarely resorted to beyond pinching. We have long been of the opinion that our garden vines on trellises are allowed too much wood in entering on a season's cultivation,

CLOSE PRUNING GRAPES.

At one of the meetings of the Alton, Illinois, Horticultural Society, a Mr. M. Pike, of Alton, Ill., a very successful grape-grower, gave the following as his experience :

"I am satisfied that the majority of grape-growers over-crop their vineyards. I have been each year reducing the wood in my vineyard, until now my Catawba canes are not more than three and a half feet long, and but one cane, and I am getting just as near the ground as possible, for the reason, among others, that they are easily laid down for protection through the winter. Last year my Catawba vines made the heaviest growth of wood and produced the largest bunches of fruit of any in my vineyard ; probably 15 per cent. more than my Concord. They ripened up well (they were not merely colored) under this system of the succession of leaves. I grew three leaves of different ages.—The original leaf is the most valuable. I then grow two additional ones. You may have the succession of leaves very early by pinching early. I do no summer pruning."

INVESTIGATING FUNGI.

Remarkable success has attended the efforts of M. Pasteur, in France, and of learned investigators in England, to ascertain the nature and, if possible, put a stay to the ravages of those diminutive but destructive pests known as fungi, which attacks and sometimes destroy whole crops of cotton, corn, potatoes, vines, peaches, pears, tomatoes, and all the fruits of the earth. Encouraged by the success of these efforts, the agricultural bureau at Washington has set some chemists and microscopists at work upon the American fungi. The N. Y. Journal of Commerce publishes in a late issue an extremely valuable review of the labors and beneficial results of this new scientific staff. From this review it appears to have been ascertained that rust, smut, mildew and mould are forms of living vegetation, and are the direct cause as well as the effect of vegetable diseases, which are often productive of immense loss by the destruction or injury of crops. The devastating effects of the fungi which cause the potato rot, of those which nearly destroyed the entire vintage of Europe of 1845, of those which ravage our native vines ; the rust which destroys cotton, wheat and cereals in general, pear tree blight, peach yellow and several other species, are well known to all engaged in agricultural pursuits. In a number of cases it is thought that an antidote has been found for the bane, but in others, notably the potato disease, no result has as yet been discovered, but it is the subject of the most minute and careful microscopic study. The results attained, however, in regard to the fungus diseases of the grape—native and foreign—pear, tomato, peach, Fiji cotton, lilac, onion and several varieties known as mildew and smut, are said to be of much importance, and will lead, in some instances, to the extermination of the disease ; in others, to effectual mitigation of their disastrous effects.—*Baltimore Sun*.

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Col. W. W. W. BOWIE,

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FARMERS SHOULD ORGANIZE.

"According to the late census 39,000,000 of people inhabit the United States. Of these 12,500,000 earn their bread by some kind of labor. And of the twelve and a half millions of bread earners, 5,922,471 are engaged in agricultural pursuits. In other words, nearly half of all the people who work in the great national hive of industry are tillers of the soil. And yet the farmers exert a comparatively small influence in legislative affairs. This is not as it should be. Those who add so much to production certainly should have a strong voice in framing rules for the government of the community. Some of our laws bear oppressively on the agriculturists. But the farmers are chiefly to blame. They must

organize, and fix upon some harmonious plan of action, if they would make their influence properly felt."

The above is taken from the *Turf, Field and Farm*, and in a few words supports powerfully what we have often before urged upon the farming community of this country. There is no concert of action, no mutual concentration of sentiment, and no united effort on the part of those engaged in this great interest, to make their immense influence, energetically exerted, be felt in the legislative councils of the several States and the Congress of the Union. In many things the agricultural interest is made to suffer and in many ways it is made the pack-horse to bear those burthens that arise from protective favoritism to other great industries in the land. Legislation should be forced to shape itself to suit the wants of Agriculture rather than any other great industry, as it is the corner stone of the nation.

THE OSIER, OR BASKET WILLOW.

Some of our correspondents are very desirous of knowing whether the Osier or Basket Willow can be profitably cultivated. It is a very difficult question to answer satisfactorily, but we will endeavor to give them the best information we can upon the subject. At the present time, owing to the few Osier meadows around Baltimore, their product is quite profitable, even when the crop is sold on the field to German purchasers—as it usually is. There can be no doubt, moreover, that the cultivation within reasonable limits might be extended, not only in the vicinity of Baltimore, but especially in the counties of the State wherever suitable lands are to be had. The only danger is a glut in the market; as the willow is an article devoted to special uses, that of basket and wicker work, and does not admit of a varied application.

The cultivation of the willow is very simple. It requires a rich, moist soil, which is not too wet, such as our alluvial bottoms, or the low, damp meadows that lie between hills. A light soil is preferable to one that is too compact, and where the moisture is in excess, the land should be so drained as to carry off the surplus water without leaving the soil too dry.

In preparing the ground for a willow plantation the first consideration is that it shall be cleared of all underbrush and weeds, and deeply ploughed and well harrowed. When this work is done, the land should be lightly worked off in rows three feet apart and the willow cuttings—which should be 9 inches long and of the last year's growth—should be planted along the rows at a distance of a foot

apart. During the first year, in order to give the young willows a vigorous start, the soil should be loosened with the shovel plow and the cultivator, taking care to leave the surface flat at the last working. Any one who knows how to cultivate corn will understand what amount of cultivation is required in an Osier plantation during the first season after planting. After the first year, a single hoeing, in May or June, to keep down weeds and briars and bushes, will be all that the plantation will require. Some willows may be cut the second year; but it is much better to not touch them until the third season; after which they may be cut annually, with the certainty of an increased product each year.

When the plantation is at its best, two tons of peeled willows to the acre is an average crop. The time of cutting varies. Some cut and strip as soon as the bark will peel freely in early summer; but this plan, though frequently followed, is objectionable, inasmuch as whilst it leaves the season of peeling very short, it also tends to the injury of the plantation. The plan which is more approved in the Northern States, is to cut the willows in the Fall of the year, as soon as the leaves are off, and stack them in bundles on the field until winter sets in. They are then hauled off to a low piece of ground, which is capable of being flooded, and set butt downwards. As soon as the spring has fairly opened, the piece of land, which is banked up all round and only occupies a small space, is flooded to the depth of six or eight inches. This flooding starts the sap in the willows, and they are then peeled at leisure. The process of stripping is, however, a tedious operation, and costs ordinarily from two to four cents a pound of dry willow. A Kentucky planter, some time since, in speaking of peeling the willow, said: "When I was a young gardener we used to make a great many baskets, and the best way we knew to get off the bark of the willows was to boil them in some kind of an old pot—it is a very easy way, and very simple." This plan might be improved where the willow is extensively grown. Long troughs, through which hot water or steam could be forced, might do the work of many days scraping, without injury to the willows. Machinery is now used for this purpose, which is said to partly economize the labor of stripping and to do its work well. Of this machine we have no personal knowledge.

In selecting Osiers for planting, care should be taken to choose none but the best varieties. Mr. Chas. Downing, of Newburg, N. Y., states that the too frequent cause of failure in growing Osier lies in the choice of English varieties, that are unsuited

to our climate. He asserts that the most popular willow, and the one most in demand by growers—*Salix Viminalis*—fails entirely in giving good shoots in this country, whilst the *Long Skin*, the *Bedford* or *Dishley*, and the *Huntington*, vary much and are quite inferior. For heavy work where *unpeeled* rods are used, he recommends FORBES' WILLOW—*Salix Forbyana*. It is very tough and healthy; but when peeled does not whiten well. For general use, he regards the PURPLE WILLOW—*Salix purpurea*—as decidedly the best, although it does not tolerate excess of wetness. Its productive powers are said to be remarkable, and for fine whole work, it is pronounced to have no superior.

The next best willow is the LONG LEAVED TRIANDROUS WILLOW—*Salix triandra*, which whitens beautifully, is very tough and pliable, and grows vigorously with less drainage than any other of good quality. For split basket work, it is a general favorite.

Finally, we say to those who contemplate setting out an Osier plantation, that before doing so it is advisable they should visit the best of those that are already established, so as to glean all the information that is necessary to carry on the plantation economically, and therefore successfully. We have no personal experience as to the profits arising from its cultivation, or manufacture at home, or elsewhere. We only presume it pays from the fact that throughout the country a large quantity is raised. A gentleman in the State of Vermont, some years since, stated that he had tried the *Salix Riminali*, and rated the produce the second year after planting (at five cents per pound) at \$750 per acre.

ACKNOWLEDGMENT.—Mr. J. J. H. Gregory, of Marblehead, Mass., will accept our thanks for the *Canada Victor Tomato and Marblehead Squash Seeds*. They shall be carefully cultivated, their qualities tested and the result of our trial cheerfully given to our readers.

STRAWBERRIES.—At the discussions of the Illinois Horticultural Society, two cultivators of the strawberry pronounced the Wilson and Green Prolific as the two best and most productive sorts.—Others objected to the Green Prolific as being too soft. It was stated that the Colfax is so rampant a grower that it kills all the weeds and takes care of itself.

MULCHING PEAR TREES.—A writer in the Tribune mulches his pear orchard over the whole surface with salt hay, in June, and rakes it up in November. This gives fine crops and protects the fallen fruit.

HARROWING WHEAT.

Wheat lands are usually seeded in the fall, two months or more before winter, and exposed to the packing rains of the fall months, which converts the mellow soil into which the wheat is placed to a hard and compact condition. The winter snows and rains continue this packing until when the ground is dry in the spring it is hard enough to bear a team and wagon without sinking into the soil but little.

That wheat *can* thrive at all, under these circumstances, is wonderful, and shows with what tenacity it clings to life and growth. Experiments have often been made in England, and to some extent in this country, of cultivating wheat by hand, with the most astonishing success. A farmer in Genesee county raised of a new variety of wheat 30 bushels on one-half acre by hand cultivation, and equal yields have often been produced in England.

But of course on large fields in this country, it is impracticable to give hand cultivation. What would be the yield of corn if the land were as hard and packed and uncultivated as is wheat lands—obviously not one-fourth of a crop.

Wheat is as sensitive to cultivation as corn, and will increase in yield quite as rapidly when cultivated. The Thomas Smoothing Harrow will pulverize the ground three or four inches deep; breaking the crust and mellowing the ground without disturbing or injuring the young plants in the least. The effect upon the crop is very marked; it starts rapidly into vigorous growth, and pushes ahead, so that unharrowed strips show plainly for a distance of over one-half mile—when two-third grown there is a foot difference in height.

The importance of this kind of cultivation can not be over estimated.

Wheat is high, and no doubt will continue—while other grains are mostly low, so that farmers will have to depend largely upon their wheat crops for current expenses.

We are personally acquainted with a large number of experiments which fully justify the above conclusions, and further, in not a single instance has a failure to be greatly benefitted been observed.

Byron Moulton, of Genesee county, N. Y., raised the past year from 50 acres 1,600 bushels of wheat. His wheat in the spring looked like all the rest in the country, very poor indeed, but after the harrowing it commenced to grow rapidly, and kept on vigorously all the season. His neighbor's wheat, which gave as good promise as did Mr. Moulton's in the spring, continued feeble all the summer, and only yielded 10 bushels per acre. The difference Mr. Moulton attributes almost wholly to the thorough harrowing it received in the spring.

Experienced wheat-growers have long claimed great advantage from harrowing wheat land in the spring, and we have yet to hear of the effect being other than advantageous; we would recommend, however, that a belt should be left unharrowed in all cases, that the effect of the harrowing may be distinctly seen. The harrowing should be done when the soil is in good order to work. The clover seed will be better covered by sowing it after the harrow, and follow with the roller.

TO THE CORN GROWER.

To the Editors of the Maryland Farmer:

I have a matter of special importance to communicate to all who may have corn to plant after reading this. It may save the loss of a crop for many, and if but one should heed it, and thereby save his crop, I shall feel that I am fully remunerated for my effort to benefit a class who actually need all that they can get, that will in any way promote their interest.

A SURE PREVENTION AGAINST THE DESTRUCTION OF YOUNG CORN PLANTS BY CUT AND WIRE WORMS.

As soon as the corn is planted, apply a *full table-spoon of ground salt* to the hill; let the salt spread over an area five or six inches across.

Do not delay the application until the corn is up, or is about coming up, or you will destroy the plants.

If applied soon after planting, the first rain will dissolve the salt, and so charge the soil around the plants with saline matter, that neither the black grub or cut worm, nor the wire worm will harbor in it.

It is a reliable remedy, and the fertilizing properties of the salt will pay well for its cost and application in the increase of the crop. Leave a row occasionally, and observe the effect. Be sure that your seed corn is good. J. WILKINSON,

Consulting Agriculturist, Baltimore.

THE IMPORTANCE OF ASSORTING FRUIT.—A correspondent in the *Journal of the Farm*, writing on this subject, very truthfully says:

"A walk through our markets will convince any one that our fruit growers are sadly negligent of their interest, in the matter of properly assorting their products before sending them to market. A dealer informed us that he once had a consignment of twenty-five baskets of peaches, on which the consignor had placed a certain price. After trying hard to make a sale without success, he picked out ten baskets of the very best and had no difficulty in selling them for very nearly as much as the consignor demanded for the whole number."

California Correspondence.

MANAGEMENT OF COWS AND CALVES.

ST. HELENA, NAPA VALLEY,
CALIFORNIA, Feb. 16th, 1873. }

To the Editors of the Maryland Farmer:

As the spring is approaching I thought it might be interesting as well as instructive, to many of your "farmer readers" who, having a few cows desire to make them as profitable as possible, to give them my experience and treatment of cows and calves which I find to work admirably. *Never let your calves suck the cows, but as soon as they are born take them from their mothers* and put them in some house or shed to themselves. Have a trough made with a scouped out bottom, (so they can obtain the last drops of milk,) and at intervals of one foot tack the fingers of an old buckskin glove; pour into this trough milk obtained from the dairy after being skimmed (at first it must be sweet and warmed a little, but they soon become fond even of sour milk mixed with a little bran;) lead up the calves, and for two or three feedings insert the glove fingers in their mouths, afterwards they will come of their own free will, and all trouble ceases. The trough should be kept covered when not in use. By adopting this plan you have the benefit of all the milk; you get rid of the disagreeable bellowing of the cows when the calves are weaned; your cows do not slacken or refuse to give down their milk, as they sometimes do when the calves are allowed to run with them a month or six weeks, and are then taken away; and in two weeks, the cows and calves can be turned in the same pasture without noticing each other in the usual way. Another great advantage, if desired, the calves for another year come in much earlier than by the old method. It is also a great advantage to the calves, for having learned to eat, they can be made much finer and larger animals by continuing to slop them. I imagine I hear some say it is too much trouble to fix a place to carry out this plan; I didn't find it so, for in two days I built a calf house and fixed everything necessary, and I am sure if you will only try it you will be pleased with the result.

Yours truly,

CALIFORNIA.

P. S. We are having glorious weather—possibly a little too much rain. Our wheat and oats look promising. Our peas are in bloom, potatoes are 6 inches high, and we are enjoying lettuce and radishes grown in the open air. We are as far advanced as you in Maryland will be in April or May.

Our almond, peach and apricot trees in bloom, and the flowers perfume the premises with their sweet odor. This is indeed a glorious climate, a glorious country, and I thank the kind Providence which guided my steps hitherward. Yet I cannot forget the ties that bind me to my native land, and hope to end my days in dear old Maryland.

C.

HUNGARIAN GRASS.

To the Editors of the Maryland Farmer:

As the Hungarian Grass question seems to be quite prominent at this time, I will give you the benefit of my experience with it last season; seeing that my hay crop was going to be very short, owing to the drought, I thought the cheapest way to buy hay was to sow the Hungarian, so after a great deal of trouble I finally succeeded in getting into fine condition three acres of bottom land (old pasture) on which I sowed one half ton of Orchilla Guano, and on the 6th of July sowed and harrowed in lightly one and a quarter bushels of seed to the acre; immediately after sowing had a light shower and from that time to the time of cutting had little or no rain, and about August 28th, when the grass was in full blossom, cut it with my mower; have since weighed it and found the yield to have been a little over four tons to the three acres. I have been feeding it for about two weeks to the horses and have noticed that it is eaten by them much more greedily than Timothy. It is such a quick growing crop that it is very exhausting to the soil. I would not cultivate it unless I manured very heavily. I am so well satisfied with it that I intend to sow 16 acres this spring and shall expect two tons to the acre. The time to sow is about the middle of May; sow broadcast and harrow in very lightly. The soil must be completely pulverized, and I believe one and a half bushels to the acre will give a finer and nicer hay than one and a quarter bushels—but if it should be cultivated for the seed, then one bushel to the acre is sufficient. My soil is a heavy red clay with clay subsoil.

"PRIESTFORD."

RECEIVED.

From R. H. Allen & Co., Seed Catalogue for 1873, New York.

From Crosman Brothers, Rochester, New York, their Illustrated Catalogue and Guide to the Flower and Vegetable Garden, for 1873.

From Henry Clarke & Sons, Nursery and Seedsman, 39 King Street, Convent Garden, London, their Wholesale Catalogue of Trees, Shrubs, &c.

From P. J. Berekmans, Fruit and Nurseries, Augusta, Ga., his Catalogue of Greenhouse Bedding, and New Plants, Vegetable and Flower Seeds, &c., &c.

MARYLAND AGRICULTURAL COLLEGE.

AGRICULTURAL COLLEGE EDUCATION.

To the Editors of the Maryland Farmer:

It would appear that your remarks under the head of "*Bad Farming*," in the January number of the *Farmer*, effect the feelings of friend Worthington, of the Maryland Agricultural College, very seriously, at least I infer so from the fact that he has come out in both the February and March numbers in lengthy replies. In the latter, he seems to think that you are entirely mistaken with regard to what the "*public expectation*" was and is in reference to the course of instruction to be given at "*our Agricultural Colleges*."

I read your remarks under "*bad farming*," with great interest, as I doubt not your readers generally did, and I certainly never thought of any one attempting to disprove the correctness of your premises or statements.

In your remarks upon Agricultural education, in the January number you say, "if our Agricultural Colleges would devote less time and expense to instruction in the classics and military tactics, and more to thorough instruction in the theory and practical details of progressive agriculture, great good would result; as it is, the most of them in the country are a mockery, and anything else but schools of agriculture."

I most heartily concur in your opinion expressed in the above, and I believe that every really practical and intelligent farmer in the country will fully endorse you, except the honorable members of the Board of Trustees, and the faculty of our College, who, Mr. Worthington asserts, have from the first, and still think otherwise, at which statement I confess I was much surprised.

Mr. W. seems firm in the opinion that it is utterly impracticable to give instruction in the field, in the stable and in the garden, in actual participation in labor, to the pupils of the Agricultural College, collateral with what they there teach and what should be taught. He says that the College would not have lived a year had it adopted a system requiring much time to be spent on the farm.

In this I am inclined to think he is mistaken and I am sustained in my opinion by the result of such a course of instruction as you recommend, and as Mr. W. condemns, practiced at the Massachusetts State Agricultural College.

I find the following in the Annual Report of that College for 1872:

After describing the collegiate course of instruction under six or eight professorships, including that most important one to the agricultural student, (viz.) Veterinary Science, it says: "Besides assisting in the cultivation of the crops, harvesting, and farm work generally, the students, under the direction of Prof. Stockbridge, have planted, tended and harvested the vegetables of the kitchen garden; straightened the course of a brook and graded its banks; dug up and over-turned a multitude of useless trees; dug and laid drains, and done much other work towards beautifying and permanently improving the farm." Hence, Messrs. Editors, it would appear to be practicable to carry out what you claim is the true character of instruction to be given at an Agricultural College. If it is practicable in Massachusetts, why is it not in Maryland?

The class of work performed by Prof. Stockbridge's class has the "ring" of sound, useful, practical teaching; and we shall hear from those who graduate under such a course of instruction; they will make their mark in the communities in which they respectively settle; and their example and intelligent farm practice will rapidly elevate their vocation to its true standard among the industries of our country; and we never need look for any such results from those institutions which attempt to make farmers without requiring the pupils to participate in all the details of the farm practice. It cannot be done in kid gloves, and patent leather boots, nor on horseback, under a parasol.

The working farmers of Maryland have been looking in vain for reports of new and valuable discoveries, and modes of execution of the practical operations of the farm, that would lighten their labors and increase their profits, until they are discouraged, and many very naturally conclude that they are deriving very little benefit from the tax that they have paid for the support of the so-called Agricultural College.

J. WILKINSON,

Consulting Agriculturist, Baltimore.

Our friend Wilkinson, by the above, has laid us under a deep obligation. He seems to have fully understood us in regard to the College from the first. We desired information, and were ignorant enough to assert that the founders of the College expected its name, style, or "*trade mark*," was to truthfully indicate its chief characteristics, but Mr. Worthington says, "agricultural instruction is *additional* only to the usual course of scholastic learning. Yet in the preamble to the Charter, "certain wise and virtuous citizens," desire to institute within their State "an Agricultural College and *Model Farm*, &c."—and for several years when under the government of its chief founder, the Hon. Charles B. Calvert, its practical working evidenced that its main object was the spread of agricultural knowledge, and that was not only chiefly taught, but the theoretical learning was practically illustrated in the field, work-shop, stables, barns and laboratory. The head and front of our offending is simply intimating that Agricultural Colleges generally have not filled public expectations, and expressing surprise that the *two* most important chairs, in *our* judgment, are vacant. We since learn that our friend and able correspondent of the past—Dr. Henkle was appointed Professor of Natural History, and that it will cover the whole field of the two chairs of Agriculture and Horticulture, &c. It may be so. Natural History includes a vast field of knowledge, and opens up to the mind of an Agassiz, hourly, subjects for investigation. Dr. H., therefore, we should think, would have but little time to spare from his expansive field of interesting and important labors to talk of farming, and horticulture, and modes of propagating plants, and illustrating his views in the open air; but for such work, if he can spare the time, there is no man better fitted by his education, learning, and practical knowledge, than our distinguished fellow-citizen, Dr. Henkle.

We may at a future time have more to say on this subject, but at present we rest our defence upon the well written reply of our volunteer counsel, Mr. Wilkinson.

TOBACCO PRESS—DUNK PAPERS, &c.

POMONKEY, Charles Co., Md., Feb., 25, 1873.

To the Editors of the Maryland Farmer:

I expected to see Dr. Morgan's *Tobacco Press* in the *Maryland Farmer* this month; as I am disappointed, I wish to make some inquiries about it.—A tobacco press, such as you represented that to be in the January number, is a very great desideratum for our section. We are tobacco growers, and any thing upon that subject is of great interest to us. We find that tobacco is almost our only money crop, and when there is a failure, partial or total, we are very "down in the mouth." There was a pretty good crop last year, but for several years previous very poor ones—hence, we have not recovered from the effects of the bad crops yet, and if prices should rule lower, as it is reported they will, last year's good crop will not bring us up straight. * * *

Your February number of the *Farmer* is unusually interesting—the article on *Tobacco* especially so; but why is it that you take no notice of the tobacco market in your *Farmer*. This is not doing justice to our staple; but I suppose our *patronage* is small, and not worth any extra trouble; but it might be larger with more attention to our specialty. The fact is, there is not much that is interesting to us in the *Farmer* on the most of the subjects written upon, and some of the writers are rather *fanciful* and *theoretical* for our *practical* people; and again, some of the articles cast a wholesale *reflection* upon the brotherhood of farmers, as being a set of asses, who cannot even use decent and proper language. The *Dunk Papers* for instance—such papers do no good, but disgust the readers, and especially those of limited education. I sometimes feel like writing something for the *Farmer*, but want of time prevents me from maturing my ideas, and perhaps also they would not be acceptable, as they would mostly be criticisms upon what I conceive are the *fancies* and *fallacies* of other writers.

But the *Tobacco Press*! I had almost forgotten it! Will it be in the March number? What will be the price? Where can it be had?

Yours, very respectfully,

R. W. BRYAN.

NOTE BY THE EDITORS.—Mr. Bryan may feel satisfied that such short, pithy letters as the one above will be always acceptable. We court the correspondence of practical, plain farmers. We seek to make our paper a practical one, but there must also be theory and science. Theories based on scientific principles, practically illustrated become experiences, and these often develop facts

of the utmost importance. We must cater to many tastes, and there is a very large class of readers with whom the style of the *Dunk Papers* is more popular than any other. Home truths, important suggestions and severe criticisms of errors, are enunciated in a witty and amusing way, which attract attention and make impressions, when if the same were said more soberly and in a dignified manner would probably be allowed to pass unheeded.—What Jack Downing, Artemus Ward, and others *sui generis* have done in other fields, Jacob Dunk has accomplished in our agricultural field.

We have begun, and intend to continue to make Tobacco, with occasional notices of the market, (price currents being supplied by the daily press,) one of the specialties of our journal. Fruit culture, stock-breeding and tobacco, being the three at present, most absorbing and important industries in which a majority of our patrons are most largely interested, we shall as heretofore continue to make the chief subjects discussed in our columns.

Dr. Morgan promised to send us a description and other particulars of his Tobacco Press, with an electrotype showing its general appearance, but he has not done so, and we are therefore compelled to disappoint the expectations of some of our friends who take an interest in the matter.

ROMANCE OF HISTORY.

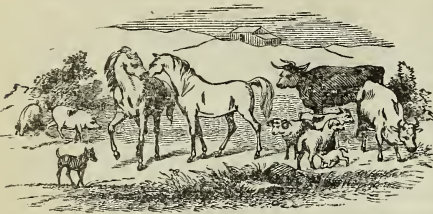
A curious bit of history, showing what a narrow escape the ex-Empress Eugenie had from becoming the wife of an American gentleman, had just come to light. The fact is thus recited by a relative of one of the parties:

In 1851 the uncle of the writer resided as American minister at Paris, with a large family around him. At this time there appeared in society there Eugenie Maria de Guzman, Countess de Montijo. A lovely person and aristocratic name, securing her brilliant conquests in that society, and constituting her one of the famous ladies in Paris. It was thought, and indeed freely remarked, that her mother was more ambitious than herself; that the mother designed her for some great alliance, while Eugenie herself appeared a model of simple sincerity, a girl who would choose to consult her heart in any matrimonial affair.

Her sister had just married the Duke of Alba and Berwick, a lineal descendant of James II of England; and the worthy Donna Maria, no doubt, designed at least an equal matrimonial destiny for the more beautiful of her daughters. But the heart is not always to be controlled, even in the most aristocratic life, or to yield to its exactions or convenience. Eugenie lost hers to a fine-looking blonde Virginian—young William Rives, son of the American minister. They were engaged to be married, but Aunt Judy Rives, a Virginia matron, very decided and angular in her scruples, broke off the match. The countess was too "fast" for her old Virginia views of social sobriety.

The woman for whom the future had reserved so much, escaped the comparatively humble match that her heart had decided upon—the destiny of a quiet Virginia house-wife—to ascend the throne of France. Alas! what other contrasts may yet remain for her! If an event has been ordained different, if a prospective mother-in-law had proved complacent, the empress, the woman who had adorned the throne of France, and displayed to the world the charms of another Cleopatra, might at this time be a quiet country matron living in a farm-house near Cobham depot, county of Albemarle, and State of Virginia.

Live Stock Register.



NATIONAL CONVENTION OF SWINE BREEDERS.

This Convention met at Indianapolis, November 20th, pursuant to notice. The attendance was large, and the proceedings of unusual interest and importance. Dr. A. C. Stevenson, of Indiana, was chosen President, and Geo. W. Rust, of the *National Live Stock Journal*, Secretary.

The following are extracts from the reports of the different committees, defining the characteristics of the several breeds, which were adopted by the Convention:

POLAND CHINAS.—The best specimens have good length, short legs, straight backs, deep sides, flanking well down on the leg, very broad, full square hams and shoulders, drooping ears, short heads, wide between the eyes, of spotted or dark color; are hardy, vigorous and prolific, and when fat are perfect models all over, pre-eminently combining the excellencies of both large and small breeds.

The committee recommended that the name of Poland China be recognized as the accepted name of this breed.

BERKSHIRES.—Color black, with white on feet, face, tip of tail, and an occasional splash of white on the arm. While a small spot of white on some other part of the body does not argue an impurity of blood, yet it is to be discouraged, to the end that uniformity of color may be attained by breeders. White upon one ear, or a bronze or copper spot on some part of the body, argues no impurity, but rather a re-appearing of original colors. Markings of white other than those named above are suspicious, and a pig so marked should be rejected.—Face short, fine and well dished, broad between the eyes. Ears generally almost erect, but sometimes inclining forward with advancing age; small, thin, soft and showing veins. Jowl, full. Neck short and thick. Shoulder, short from neck to middling, deep from back down. Back, broad and straight, or a very little arched. Ribs long and well sprung, giving rotundity of body; short ribs of good length, giving breadth and levelness of loin. Hips, good length from point of hips to rump. Hams thick, round and deep, holding their thickness well back and down to the hocks. Tail, fine and small, set on high up. Legs short and fine, but straight and very strong, with hoofs erect, legs set wide apart. Size, medium. Length, medium; extremes are to be avoided. Bone, fine and compact. Offal very light. Hair, fine and soft; no bristles. Skin, pliable. The Berkshires are hardy,

prolific, and excellent nurses; their meat is of superior quality, with fat and lean well mixed.

SUFFOLKS.—Head, small and very short; cheeks prominent and full; face dished; snout small and very short; jowl fine. Ears small, thin, upright, soft and silky. Neck very short and thick, the head appearing almost as if set on front of shoulders; no arching of crest. Chest, wide and deep; elbows standing out; brisket wide, but not deep. Shoulders and crop—shoulders thick, rather upright, rounding outwards from top to elbow; crops wide and full. Sides and flanks—ribs well arched out from the back, good length between shoulder and ham; flank well filled out, and coming well down at ham. Back broad, level and straight from crest to tail, not falling off or down at tail. Hams wide and full, well rounded out; twist very wide and full all the way down. Legs and feet—legs small and very short, stand wide apart, in sows just keeping belly from the ground; bone fine, feet small, hoofs rather spreading. Tail small, long and tapering. Skin, hair and color—skin thin, of a pinkish shade, free from color; hair fine and silky, not too thick; color of hair pale yellowish white, perfectly free from any spots or other-color. Size, small to medium.

CHESTER WHITES.—Head, short and broad between the eyes. Ears, thin, projecting forward, and lopping at the point. Neck, short and thick. Jowl, large. Body, lengthy and deep; back broad. Hams, full and deep; legs, short, and well set under the body for bearing the weight. Coat, thin, white and straight, (if a little wavy it is no objection.) Small tail and no bristles.

THE ESSEX is a black hog, and originated in the south of England. They are small to medium in size, and are extensively used in England as crosses on the large course swine, with a view of improving their fattening qualities. The best specimens may be known by being black in color. Face, short and dishing. Ears, short, soft, and standing erect while young, coming down somewhat with age. Carcass long, broad, straight and deep.—Hams heavy and well let down. Bone fine, and carcass, when fattened, mainly composed of lard. Hair generally rather thin. Fattening qualities superior. As breeders they are very prolific, and are fair nurses. We can recommend them very highly to cross with the coarse dark hog of this country.

A GENERAL STANDARD.

Mr. Thrasher, from the committee, submitted the following report of the general standard of excellence, showing a perfect hog most profitable to the farmer and consumer, which was adopted:

He must have a small, short head, heavy jowl, and thick short neck. Ear small, thin, and tolerably erect, but it is not objectionable if it droops slightly forward. He must be straight on the bottom, from the neck back to the flank, let well down to the knees in the brisket, and possess good length from head to tail. Back broad and slightly curved or arched from the shoulder to the setting on of the tail. Ribs rather barrel-shaped. Tail small. The ham should be long from the hock to the letting off at the loin, and be broad and full. Shoulder not too large, and yet sufficiently to give symmetry to the animal. Hair smooth and evenly set on. Skin soft and elastic to the touch. Legs

small, well set under the body, and the space between them wide. A good depth between the bottom and top of the carcass. He must possess a good quiet disposition, and a general rule should not weigh more than three or four hundred pounds gross, at 12 to 18 months. Color may be black or white, or a mixture of the two. Such a hog will measure as many feet from the top of his head to the setting on of his tail, as he does around the body, and as many inches around the leg below the knee as he does in feet in length or around the body, and the depth of the body will be 4-5 of the height.

THOROUGHbred SWINE.—The committee on *What Constitutes Thoroughbred Swine?* submitted the following report:

In the absence of any system of records by which pedigrees of swine are kept, your committee can only give an expression which, from the nature of the case, must be somewhat general. Only such breeds should rank as thoroughbred as are recognized in authentic history as of remote origin, and have steadily been bred in a line, resulting in the establishment of a fixed type, capable of transmitting itself with uniformity. Your committee would recommend that the leading breeders of pure-bred swine form breeders' clubs, for the purpose of establishing herd registries, after the plan adopted by the breeders of thoroughbred cattle, in order to secure greater uniformity, and to perfect, as soon as possible, the various breeds.

PUBLICATIONS RECEIVED.

Proceeding of the First National Convention of Short Horn Breeders, held at Indianapolis, Nov. 27, 1872.

This is a very interesting document to the general reader, and is of intense interest and much value to those engaged in breeding short horn cattle. A great many important facts were elicited during the discussions.

The American Turfman. New York.

A Monthly Record of the Turf, and other matters connected with horses and horse-men, and bids fair to be a sprightly, entertaining live paper, and will no doubt receive a liberal support from turfites and all those in any way connected with the Turf, as its price is only \$1.50.

"Agriculture as a Pursuit."

This is the subject of the Introductory Lecture before the Agriculture Class of the State University of Georgia, delivered January 29th, 1873, by DR. E. M. PENDLETON, Professor of Agriculture and Horticulture. We have only space, in this brief notice, to say it is a sensible, sound and eloquent disquisition upon Agriculture as a pursuit, its wants and needs, the advantages it should derive from Agricultural Colleges, and the necessity there exists to have more knowledge and information among its followers. We shall take pleasure to lay before our readers at a future time some extracts from this excellent discourse.

Premium List for the Seventh Grand State Fair of the Mechanics and Agricultural Association of Louisiana.

The Fair will commence in the city of New Orleans on the 23rd of April 1873 and continue seven days. Over \$20,000 in premiums are offered for a great variety of objects, many of which are not usually embraced in such programs, one feature is, \$140 divided into a variety of premiums for useful dogs. From the amount offered, and the wide field over which the association extends its encouragement, we feel sure and certainly hope, their meeting will be a complete success.

The Poultry House.

POULTRY NOTES.

The following, from the *American Poultry Gazette*, is worthy of study by those who have just engaged in the business of rearing fowls:

Rules for Rearing Chickens.—1. Keep young chickens in a warm, dry coop. 2. The coop should be cleaned out and dry earth thrown in every day. 3. Let the chickens out after the morning sun has removed the wet from the grass. 4. Feed them suitable food, and frequently. 5. Keep pure water where they can get it easily. 6. Keep them away from decaying fruit and vegetables, and stagnant pools.

Food for Chickens.—Thomas Heathwood, a successful breeder of game fowls, gives the following as the proper food for young chickens: One egg, with the shell, beaten into a quart of raw oatmeal, and wet up with new milk. Feed them from four to six times a day, according to age. Lettuce, onion tops, or fresh grass, chopped fine, should be given them at least once a day.

Eggs.—A good egg is made up of ten parts shell, sixty parts white, and thirty parts yolk. The white of an egg contains eighty-six per cent. of water, the yolk fifty-two per cent. The average weight of an egg is two ounces.

Cold in the Throat.—This disease is manifest in fowls by a noise, as if some substance had stuck in the throat—phlegm is present in the throat. The following remedy is highly recommended: A tablespoonful of water containing two drops of the tincture of aconite, given two or three times a day, and plenty of fresh water to drink.

Buying Eggs.—There are many reasons why people desire to buy eggs instead of fowls; the principal one is, the great difference in the cost of first-class birds and their eggs. The money necessary to purchase such fowls cannot be spared, and a start may be gained by purchasing eggs, with much less money.

Mr Williams, a gentleman of great experience, says, "people expect greater results than they should in purchasing eggs for hatching. The breeder, however much experience he may have, may not make up his breeding pens as they should be, and hence every bird may not be perfect."

Hen's Nests should be made by placing in the bottom of the nest-basket or box a cut turf, and a shovelful of dry earth or ashes; on this place short straw, first hollowing out the earth in the shape of a nest. A more even temperature is obtained for the eggs than in straw nests alone. Such nests are particularly adapted for early setting when the weather is cold.

Sex of Eggs.—It is frequently asserted that the sex of eggs can be determined by the shape of the egg, the position of the air cell, the curl or twist at the small end, etc. These tests have been disproved by careful experiments; and upon the best of authority we assert that all such ideas and theories are erroneous and absurd.

THE DAIRY.

DAIRY FARMING AS SEEN BY A SOUTHERNER.

Mr. Jas. W. Lyon, owner of a large dairy farm near Baltimore, Md., has recently, for his own benefit, made an extensive tour through the chief dairy districts of the Northern States. His observations are printed in the *Tribune*, and will not only interest dairy farmers of the localities visited, but such parties as propose entering this department of farming.

As to steaming and soiling, he found it practiced only on three farms—at Springfield, Mass., by Wm. Birnie; Wethersfield, Ct., by the Wells Brothers, and Col. Waring, at Newport. He heard also of two others. Many other intelligent farmers think well of the system, as applied to tillable land, but do not adopt it on account of the large area of land now in pasture, which cannot economically be brought under cultivation at the present price of labor.

BREEDS OF CATTLE.—The native cattle predominate very largely over all others, and many are fine, due in part, he thinks, to the fine pastures given them. Where blooded cattle were found they were in small herds, never exceeding 20. The Ayrshires are the favorite, though some prefer the Short-Horns. Mr. Chenery, near Boston, has the Holsteins, and likes them well, but Mr. Lyon thinks they are an experiment as yet. They are heavy milkers certainly, but are costly feeders, and their butter-producing qualities are not yet established. Some Dutch cattle at Goshen are much liked. A few Alderneys he found near cities, kept as butter producers for rich city patrons at high prices, but he thinks they are ruled out for general dairy farming. Of Devons he saw very few, and heard none recommended.

The prices of milk, as received by the dairy farmers at wholesale, ranged from two to three cents per quart.

The feeding for milk he found best in Orange county, where also the best prices were realized. Some corn meal is generally given in summer, and always in winter. Brewers' grains and sprouts are largely used, and drilled corn is fed in summer when necessary on account of failing pastures. The use of fodder corn, both for summer and winter feed, is largely increasing. Roots are considerably fed in winter in Central New York, and in Massachusetts and Connecticut. But the vast majority of farmers confine their feed to native grass pastures in summer, hay and corn-fodder in winter, and a little grain or roots in early spring, so as "to

carry them through" in fair condition. No variety of grasses is produced—he saw but one field of lucerne. Almost invariably clover, timothy, and the native grasses were "the stand-bys."

The best land and the best farming was in Central New York, particularly in the Mohawk Valley. Orange county and upper Vermont are also splendid grass regions. Massachusetts and Connecticut have such wretchedly poor land—except in the Connecticut Valley—that he "don't care to speak of it." They, however, have good farm buildings—where they have any. The stabling in upper Vermont is better than in New York, but neither is "what they should be."

As to the profits of dairy farming, he does not speak encouragingly. "Outside of Orange county, and leaving out special exceptions elsewhere, they are not making anything." The cows yield, gross, from \$40 to \$45 per head; "the average is fully five acres to the head, or more; say 30 cows to the farm—gross product, \$1,200 to \$1,400; add for a few hundred weight of pork, a few beef cattle, or a couple of colts, and you have still less than \$2,000 gross sales. But they did much better with dairy produce some years ago, and their lands have doubled in value in a few years, owing to increased population and railroads. Good land, tolerably well improved, cannot be had anywhere in the dairy region for less than \$150 per acre near a railroad."—*Country Gentleman*.

TO TRAIN FUCHSIAS.—When a slip has grown six or eight inches high, nip out the top down to the last set of leaves; it will then throw out branches on each side. Let these grow eight or ten inches; then nip them out as before; the tops of each branch, when grown the same height as the others, nip out again; then procure a stick the size of your finger, eighteen inches in length; take a hoop-skirt wire, twine back and forth alternately, through holes made in the stick equal distances apart; place this firmly in the pot back of the plant, tie the branches to it, and you will have, when in flower, a beautiful and very graceful plant. Having one trained to that way last season, it was the admiration of all who saw it.

NOTHING is more refining than the culture of flowers. Flowers are nature in her best estate. They are the perfection of color and form. No painter can equal the tints of the rose. No sculptor can rival the grace of the lily. Children brought up to the care of flowers insensibly acquire something of their beauty. The eye is cultivated more than it can be by pictures. What adds more to the humblest home than a few bright flowers and climbing vines?

EARLY PEARS.—The Doyenne d'Ete pear ripens at Norfolk, Va., in the latter part of June, or about the time or soon after our northern strawberries. A few thousand bushels would be acceptable to the people of the North about that time.

THE APIARY.

APIARY NOTES.

COAL OIL FOR ROBBING.

An old bee-keeper says that coal oil sprinkled about the entrance of the hive is a sure remedy to drive away robber bees. He says he has tried it many times, and never failed to get the best results from its use.

TO ASCERTAIN PARENT STOCK.

Berelepseh says when you do not know from which a swarm of bees have been issued, detach twenty or thirty bees from the cluster, dropping them into a tumbler or small box; carry them in front of the apiary, and throw them up in the air by a whirling motion of the arm. Most of them will immediately repair to the parent hive, lighting near the entrance and standing there fanning briskly, before rejoining the general mass, thus indicating their native home.

CORN SILK FOR SMUDGING.

A New York bee-keeper says to smudge bees he uses corn silk, and likes it better than anything he has before tried. It is about the same texture as tobacco, and burns readily, giving a good, thick smoke. It is cheap, and can be obtained in any quantity at husking time; and enough for a trial can be obtained from any farmer's corn crib.

TO GET RID OF MOTHS.

An experienced apiarian says that eggs of the moth miller will not hatch during the cool weather of fall, are destroyed by freezing in winter; but when combs are removed from the hive in summer, they should be watched closely, and as soon as the eggs begin to hatch smoke them with brimstone. Repeat this several times, letting them hang in the box or close room between times, and they will soon be free from moths.

VALUE OF THE HONEY EXTRACTOR.

A Kentucky correspondent of the *American Bee Journal* says that this season has demonstrated the value of the extractor. Those who had no extractor got little if any surplus honey. There is less work in caps this season than he ever knew since 1868, and yet the body of his stands was so full that if he had not extracted half, the queen would have been crowded out of her brood nest.

USING WASTE COMB.

The bee-keeper's Text Book says all waste comb should be rendered into wax by crowding them into a sack made of coarse, open cloth, and place it in a kettle of boiling water. Continue to press

it with a hoe, removing the wax as it rises to the top. Wax may be bleached perfectly white by forming it into thin flakes, by pouring it upon the surface of tepid water, and afterwards spreading it upon canvass out of doors.

TO KEEP HONEY COMBS.

A writer in the *American Bee Journal* says that for several years he had practiced the following method of preserving old combs from the depredations of the moth when it is not convenient to melt them up at once. Lap them in the sun until they become softened, then roll them up and press them with the hand into hard, round balls. In this condition they may be kept without loss or danger for years.

KEEPING HONEY.

A wholesale honey dealer says honey will not candy if a teaspoonful of cream tartar dissolved in water be mixed with a gallon of honey when scalding hot. Care must be taken not to scorch the honey.

BEEES IN SIBERIA.

It is said that great numbers of bees are kept in Siberia, cold as it is. The natives hollow the trunk of a soft wood tree five or six feet long, for hives, which are usually suspended from trees in the edge of the woods, to prevent the bears from eating the honey.

USE OF WOOL IN THE APIARY.

Langstroth recommends the use of wool for stopping up hives in case of robbery. It can be crowded into place in a moment, admits air, and is easily removed. Robbers will, he says, very quickly retreat from a hive well woolled. This is certainly a cheap and simple remedy.

A newspaper of Iowa City gives rather a discouraging account of what the farmers in those "diggings" are doing, or rather not doing. Here are the prices current: A pair of winter boots cost two loads of potatoes; a night's lodging, a load of oats; the wife wears five acres of wheat; the children each ten acres of corn; the price of an overcoat is a good four-year old steer; of a Sunday suit, twenty fat hogs.

AMMONIA FOR VERBENAS.—The sulphate of ammonia is an excellent manurial liquid to apply to verbenas or any other flower, giving to the foliage a dark green luxuriant and healthy appearance. It is economical, clean and easily applied. Prepare it in the evening before using, by dissolving one ounce of ammonia in two gallons of water. It may be applied once a week with safety.—*Southern Farmer*.

Mr. Albert Starlings lost by dogs an entire flock of Southdown sheep Friday night. Within a few months over a hundred sheep have been killed by curs in a radius of three miles from Friendship, A. A. Co.

THE FLORIST.

ROSES.

The rose requires a deep, rich, loamy soil, unshaded or smothered by trees or shrubs; good drainage, careful waterings, if the season is dry and close, judicious pruning.

The soil should be well intermixed with thoroughly decayed manure; and during the heat of summer it should be mulched with straw manure, to keep the roots moist and cool, and encourage a strong growth.

All the wood which produced flowers last season should be cut clean out, or back to the strong, fresh growth of the past year; and these fresh shoots can also be pruned one-third or more of their length.

This may seem to the amateur gardener a terrible waste of material, but it will make the rose throw out stronger flowering shoots, and produce flowers of extra size and beauty. So spare not the knife! As early in the spring as is practicable, cut back the branches with a will.

Hybrid Perpetual Roses have been the fashion of late years; but they are not as free bloomers as the Bourbon and Hybrid-China. Their name is also a misnomer, for, though they may bloom again in the autumn, they will not flower as profusely as in June, nor will their blossoms be as handsome, unless the shoots are trimmed back in July to within two or three eyes of the main stem.

The old fashioned Moss, Damask and Provence Roses of our childhood far excel these so-called Perpetual in fragrance, and they are rapidly coming into favor again.

Christata, or the Crested Moss Rose, is one of the loveliest of its class. The plant from which all this species of roses is descended was discovered years ago, growing in the crevice of a wall at Friburg, Switzerland. There is a difference of opinion among florists as to what particular species the *Christata* belongs, and it is thought by many to be more like the Provence Roses than the true Mosses, for, when fully developed, it resembles the old Cabbage or Provence species. Its buds are perfect! The calyx is divided into a fringe or mossy crest, clasping and half surmounting the rich pink petals, as they strive to unfold their many leaves. The moss is more abundant and longer than that on other Moss Roses, and the buds are very large. This variety requires a deep, rich, moist soil for its perfect development; and when thus grown, it will command greater admiration than any other rose.

Roses are easily propagated by cuttings, but the shoots should be old enough to be free from softness, yet not too woody or hard. It is best to cut off the shoots just below a joint, trimming off the leaf attached to it, and leaving two or three buds above it, with leaves on them; but when they are too luxuriant cut off a part, for if they wither the cutting will not strike root.

Sand is far better than loam for rooting cuttings; so fill up your tiny pots with it, and insert the cuttings close to the edge of the pot, keeping it thoroughly wet—for if the sand dries the tiny roots will die.—Then sink the pots in a hot-bed made of manure, or in a pan of hot water, changing it as it cools.

Bottom heat is a necessity—without its aid there is little use in attempting to strike tender roses; and a

glass shade, to retain the heat and moisture, is also needful. Another way to strike cuttings is to fill a large flower-pot half full with a little rich loam and two or three of sand; then plant the cuttings close to the edge, about half an inch apart, and cover them with a pane of window-glass. Place the pan in a pot of hot water, in a window, and, if you change the water three or four times a day, you will have a good hot-bed for striking tender cuttings of all kinds. It will take from three to five weeks for delicate roses to become rooted, and they must be kept well watered all the time. In planting cuttings, the sand must be firmly pressed around the base, so that it is in the closest contact with it.

Our roses are often ruined by the slug and the green fly. A few days of neglect, and every bush will be shorn of its glory. But if air-slacked lime is scattered over the leaves while wet with morning dew it will usually prove an effectual remedy.

A pint of common soft soap, with a pint of fine salt added to ten gallons of warm water, syringed over the bushes, is also a good insect destroyer. No one can expect to cultivate flowers without trouble. So as soon as the green leaves appear we must begin our fight against their insect enemies.

Rose-bugs are routed by shaking the stems containing them over a dish of hot water, or hand-picking and burning.

Soot is an excellent remedy for mildew; it must be dusted thickly over the plants while wet with dew, and in twenty-four hours syringed off. It is also an excellent fertilizer to the soil. Wood ashes can be applied in the same manner for both mildew and insects.

The Florists' Catalogues offer us many roses with high-sounding names, a few of which we select for notice. *Devoniensis* is an unsurpassed tea-rose, creamy white with a tinged center, and of most delicious odor. It is a delicate rose in northern latitudes, and must be carefully housed during the cold weather, though at the south it will endure an ordinary winter without protection.

Maréchal Niel is of an intense golden yellow, the finest known; its fragrance is unsurpassed; but, like the *Devoniensis*, it cannot endure the cold.

Madame Falcot is of a deep nankeen yellow, with a perfect bud. *Celine Forrester* is a paler and smaller, blossoming in clusters.

Fils Niphotos is pure white, with lemon center, and is not very hardy.

Pius the Ninth is the deepest, darkest rose that we possess. How perfectly its rich tints set off its more delicate sisters!

This exquisite pink, and model of symmetry, is *Comtesse Chabriland*; and next to it is the *Comte de Nantuil*, a summer rose, sweet and bright, monthly in habit, and hardy in some latitudes.

Those rich, brilliant flowers are *Alfred Colomb*, exquisitely petaled; *Charles Lefebvre*, beautifully blended with crimson, purple and scarlet—its leaves as regular as those of a Camellia; *Eugene Appert*, deepest crimson, and *Madame Charles Wood*, claret crimson, among the largest roses grown.

Moss Roses add to the charms of a bouquet—such as *Princes Adelaide*; *Comtesse Marinas*, a pure white; *Lanier*, rosy crimson; *William Lobb*, purplish crimson; and *Christata* the peerless.

The white "perpetuals," *Madame Vidot*, *Sophie Coquerelle*, and *Mrs. Rivers*, are lovely models of their species, and are more or less flesh-tinged at the center.—*Scribner's Monthly*.

LADIES DEPARTMENT.

THE LIGHT OF THE HEARTH.

Father and children with red wet eyes,
Open the cage and the linnet flies;
All the house has been sorrow rack'd,
And water and food the bird hath lack'd.

Mother sleeps in the churchyard near,
Her seat at the board is empty and drear;
The rose bush withers just at the door,
The kind hand waters it there no more.

The spinning wheel is silent there;
With holey stockings the boy doth fare;
The spider spins on the ceiling gray,
No brisk broom e'er sweeps it away.

The mother's care was ever blest,
Her busy hands were never at rest;
Father was often angry and mad,
But now in the ingle he sits, so sad!

Sad he sits by a cheerless fire,
Help from strangers he now must hire;
Much indeed may be bought for gold,
All save the heart that is now so cold.

The busy, blessing, caressing hand,
The face so thoughtful, and sweet, and bland,
For the first, last time are loved and known
When the gentle light of the hearth has flown.
—All the Year Round.

CHAT WITH THE LADIES FOR APRIL.

BY PATUXENT PLANTER.

"April, a child, half tears, half smiles,
Trips, full of little, playful wiles;
And laughing 'neath her rainbow hood,
Seeks the wild violets in the wood."
"Come, gentle Spring, ethereal mildness, come."

As this month brings forth many sweet flowers, the van-guard of the troops that are to follow in succession during the year, I feel sure you will all heartily join me in the fervid aspiration of the poet:

"Blessed be God for flowers,
For the bright, holy thoughts that breathe
From out their odoriferous beauty, like a wreath
Of sunshine on life's hours."

The violets, daisies, lily of the valley, johnquil narcissus, dyletra spectabilis, hyacinths, crocus, and many other flowering bulbs, and some shrubs, will be in bloom this month. Have the flower beds and borders cleared off and put in order. Many annuals may be sown this month in the open ground. Arrange for a full supply of bulbs, and seeds and bedding-out plants, so that your friends visiting you this summer may, on strolling through the lawn or flower garden, with truth exclaim,

"How exquisitely sweet
This rich display of flowers—
This airy wild of fragrance,
So lovely to the eye,
And to the sense so sweet!"

I trust your *Tulip* beds are in a condition to insure a glorious display next month, with *Crown Imperials*, *Fritillarias*, *Peonies*, &c. Be sure and secure a supply of *Dahlias*, *Tinnias*, the splendid *Japan Lillies*, and the queen of all bulbs, *Gladioli*—not forgetting

"The *Tuberose*, with her silver light,
That in the garden of Malay
Is called the mistress of the night;
So like a bride, scented and bright,
She comes out, when the sun's away."

While I would recommend you to purchase a few of the novelties in flowers, do not neglect the old sorts, which have of late years been too much pushed out of sight by the more flaring and pretentious exotics and foreign arrivals, which are introduced with high sounding names, and a flourish of trumpets, in many

instances only proving that they "were far-fetched and dear bought." *Columbines* have been greatly improved of late, as also the *Balsams* or *Lady Stippers*. Be sure and plant the new *Cockcombs* and *Princess Feathers*, *Hollyhocks*, *Tinnias*, and *Phlox Drummondii*. Great attention of late years, in England particularly, has been given to the *Virgin's Bower*, of which there are many varieties and of many colors. One is a fine blue, erect shape, and not a climber.

Climbing Shrubs.—Have an abundance of *Honey-suckles*, *Wistaria*, *English and American Ivy*, *Bitter Sweet* or *Jacob's Staff Tree*, and *Prairie Roses*.

Plant a few *Madeira Vine* roots about the porch and windows, if you desire grace and beauty and delightful perfume to please the senses at early morn and dewy eve.

This month is a good time to plant shrubs and low growing trees on the lawn, such as *Magnolias* of every sort, *Mimosa*, *Athens*, *Spiraea*, *Weigelia*, *Deutzia Scabra* and *Gracilis*, *Lutia*, *Mahonia*, *Berberis-Calycanthus*, or *Sweet-Scented Shrub*, *Tamarix*, *Laburnum*, *Burning Bush* or *Strawberry Tree*, *White and Purple Fringe*, *Dwarf Horse-Chesnut Tree Box*, *Japan Quince* or *Pirus Japonica*, *Lilacs*, and, last, though far from least, the beautiful *Crape Myrtle*, both red and white. These are some of the finest of largest sized flowering shrubs. For superb evergreen shrubs I would urgently advise the culture of *Kalmias*, and the hardiest of the *Rhododendrons*. Of *Roses* and *Bedding Plants* I will talk next month. Permit me now to urge you to procure *Vick's* or *Briggs & Bro.'s* Quarterly Catalogues; they are both issued in Rochester, N. Y., at the ridiculously low price of 25 cents per annum, and are gorgeous flower instructors and hand books for floriculture, and also get Mrs. Phelps' Botany, and study that science. You will thus learn the culture of trees, shrubs, fruits and flowers—their origin, formation, structure, habits, wants, and add greatly to your interest in lovely and useful productions of mother earth. Such study and careful reading will furnish you with amusement and instruction, and contribute to your own pleasures, and the moral good of your friends. It brings on a more intimate acquaintance with nature, and imperceptibly leads the soul from nature to "Nature's God." It tells us that all things earthly are within the reach of man—that flowers and trees are creatures as much of climate and culture as man is of habit and education; we learn, for instance, that the rich and luscious peach is only the improved and cultivated bitter almond. The rose, of which there are a thousand varieties, each different in shape, size, color and perfume, has been produced from the common wild briar. Learn to graft, to bud and to hybridize; to generate new plants, flowers and fruits, from seeds, or by crossing or species with another. It is a becoming and beautiful occupation for womankind.

It is really wonderful what may be, and astonishing what have been, the results of time, patience, skill and science. You may in a single trial in one season, hit on something which will prove a fortune, and give undying fame to your name. Large sums have been realized from the propagation of a fine rose, a new potato, or a strawberry plant. You can do such things as well as others, if you study a little, devote a little labor and spend a little time in what amounts at last to only amusing, pleasant recreation. The enjoyment of a triumph would be delectable, and a life joy. Begin this year and experiment with some flower, save potato and strawberry seed, and fruitfully one strawberry with the pollen from another; so with grapes, watch the results, and in time you may or most likely will produce a new plant of great value. To watch the progress of your experiments is a high gratification. I remember I felt the pride of a conqueror when I had, by budding, a white, yellow and red rose blooming on one branch, and a tree bearing three kinds of pears.

A convenient bag for shoes may be made of gingham or delaine, and hung inside a closet door; the back of it straight, nearly the width of the door, and a good deal longer than a pair of shoes; attach loops to it to hang on nails driven into the door; the front of it is gathered full, sewed by a seam to the back at the bottom and sides, and stitched fast to the back at regular intervals, forming three pockets; hem and shirr the top and draw it up loosely with tape. Others recommend a low square box on casters, cushioned on the top, and fitted with two drawers, one for hose and one for shoes.

For the Maryland Farmer.

AUNT SALLY OF FARMING, &c.

SALISBURY, March 12, 1873.

Messrs. Editors:—I've been very much upset in mind as to what's my duty; you know the "Good Book" says, "Do unto others as you would have them do to you," but I am real vexed at the way *Wicomico* showed me off in the *Farmer*; everybody said at once, that's *Aunt Sally*. Now I thought when you writ about people, you didn't call them right out by name, but just hinted like, in a round-a-bout way, and left one to guess who was meant. Some folks say, don't take it to yourself; but I'd like to know how I could help taking it; where's there another woman about here that everybody calls *Aunt Sally*? whose husband's named Jo, and he's a blacksmith? and the unkindest cut of all, is about the farm—but it is mine—and I've got a right to say so; still I don't think it's clever in *Wicomico* to repeat all she hears people say. If she had as much work to do as *Aunt Sally*, or did as much, she'd have less time to write about the neighbors. I could tell you some things about her too, maybe she wouldn't like to see in print! But as the Good Book says forgive, I guess I'll try. One thing though, Mr. Editor, I've sot my mind on, that is, if agreeable to you, I'll tell you myself about my affairs, if I've got to be writ about. I ought to know more about them than anyone else, and I'll promise to keep in the track better than *Wicomico* does; for ain't you always having to keep hinting to her, "write on Domestic Economy," &c., &c., and I take that to mean "women's work," and gracious knows I ought to be able to write on that, for I've been at it all my life, so long, I think I'm nigh about perfect now. There's nothing like good management. I've seen some wimin work themselves almost to death, and never get anything done. There is particular work for every month in the year, and just as sure as you let one month's work crowd on another, you'll have trouble. Begin house-cleaning in March; some say it's too cold—not a bit. Housekeepers often make an unnecessary Babel, stripping up carpets, and upsetting the whole house at once. Commence quietly; take some rainy day, when you are sure no company will interfere, clean out your scrap drawers, and overhaul the closets; rubbish is sure to collect during winter; don't keep things around that's of no use; give your old clothes to the poor, and send the scraps to the paper mill, it's far better than to have them around to collect moths; then, when a pleasant day comes, you're all ready for the work; after that there's soap to make, all the grease saved, must now be made up, and everything cleaned up as you go. Then outdoor whitewashing should be attended to, before the leaves put out on the bushes. All these things done in March, leaves you time to enjoy the spring air, and bright sunshine of April. Your chickens are now to look after, and the garden, neglected during winter, requires constant attention. Remember an old woman's advice, and don't let your work get ahead of you. If you like my plain way of telling you about plain things—why I'll try and get my spring work all done up in time, to have a little chat now and then with you, and I'll tell you my way of drying and preserving fruit, and many other little things that come in as wimin's work.

"Man's work 's from sun to sun,
Woman's work is never done."
Yours,

AUNT SALLY.

Old ribbons will look quite renewed if washed in cool suds made of fine soap and ironed when damp. Cover the ribbon with a clean cloth and pass the iron over that. If you wish to stiffen the ribbon, dip it, while drying, into gum arabic water. White silk gloves wash well, and should be dried on the hands. Never dampen bonnet ribbon and iron it wet—it makes it stiff as horn.—*Rural Register*.

Iron rust is removed by salt mixed with lemon juice. Mildew, by dipping in sour butter milk and laying in the sun. Ink stains may sometimes be taken out by sneaking with hot tallow, left on when the stained article goes to the wash. Freezing will take out old fruit stains, and scalding with boiling water will remove those that have never been through the wash.

For the Maryland Farmer.

SPRING TIME.

Once more we hail returning spring,
And search for early flowers,
Again our cheerful voices ring,
All through the woodland bowers.
The birds are singing in the trees,
Their happy, happy notes,
On every soft, and gentle breeze,
Their merry music floats.
Wicomico! thy banks are fair,
Thy hills and dales are green.
Here brightest birds and flowerets rare,
Can still be found, I ween.

Far away o'er the woods, the purple mist of spring time hangs, like a veil of enchantment, o'er each distant scene, with a promise of coming beauty, and budding vegetation, and the joyous birds, that seem to fill the air with one glad anthem of praise from their tiniest feathered throats, we almost think, they utter our happiness, as well as their own, "thanking God for the beauty of this, his fair and glorious creation." Only a few days ago and the lofty trees were hung with icy pendants, glittering like diamonds in the sun-light; now their deep, sombre green, stretching away as far as the eye can reach, gleams with a mellow light; the soft carpet of pine straw under our feet, and the aromatic fragrance all around, render our walks delightful. Spring is the season of hope and promise. The failures of past years are forgotten, and everyone goes to work with renewed vigor.—"Nature is the embodiment of one idea—that of hopeful and exulting life." Yet we cannot escape difficulty. "Earth is cursed, and everywhere she puts forth her thorn, in obedience to her maker's withering word;" true the curse is tempered with the mercy which yields unnumbered blessings to the bond of toil, and everyone hopes for brighter days, and better crops the coming year. On every pond men are digging, and hauling, ditching, and making compost, repairing fences, preparing for their annual crops. The strawberry beds are alive with cheerful workers, hundreds of ours comes in bearing this year in our county, and the hopes and expectations of the cultivators are very high, as their vines are in fine order, and give promise of unusual crops. The peach is now budding, and knowing ones say the fruit is uninjured. Higher up the Peninsula reports are unfavorable.—Cranberries are succeeding well; although last year was unfavorable, the yield was satisfactory. Our meadows are filled with wild vines, which are transplanted and cultivated; the fruit is of good size and flavor, selling readily from ten to twelve dollars per barrel. Everyone here has the small fruit mania; but like all epidemics 'twill soon pass away—some are already discouraged. I saw an article on coal ashes in the *Farmer*—let me tell you my experience with them. The plum with us is a complete failure; the curculio is master of the situation. I had a large tree that had long been a lumberer of the ground. A few years ago I found a bank of coal ashes had been thrown around it during winter. I allowed them to remain, and in summer the tree was loaded with delicious fruit; since then I always use them abundantly around my plum trees, and never fail having a good crop. Several of my neighbors have since used them, with the same gratifying results; also, around grapevines, gooseberries and currants, an application of them has proved beneficial. I used at least a bushel to every tree. Would it not be wonderful if the formerly worthless coal ashes prove a remedy for our diseased plum. Will some of the readers of the *Farmer* give them a fair trial? *WICOMICO*.

When a hoop-skirt is soiled, put it into a tub of hot suds, and rub it with a clean scrubbing-brush or whisk broom. Rinse it and hang it in the sun. It will be whitened, but a little stiffer than before.

It is advised that calicoes be stiffened with starch made of coffee-water, to prevent any whitish appearance. Colored articles should never be hung to dry in the sun, which is sure to fade them.

Dry white woolen stockings on shingles cut the right shape and size. Each member of the family should have a pair or more of these stocking boards. Pin the hose over the upper edges and hang on the line by strings, to dry. They cannot shrink and need no ironing.

[ORIGINAL.]

TURNING NEW LEAVES.

BY FRANCES FAIRVIEW.

The great object in farmers' households now, in a time of severe trial and financial pressure, is to live economically; that is, within the family income, and as much within it as circumstances will permit. The importance of prudent management within doors can hardly be over-estimated. In how many cases may success (I do not mean altogether success measured by dollars and cents,) be traced to the sharp eye which the mistress kept at every point of the citadel, and in how many cases may failure and its terrible consequences be traced to extravagance within doors!—Let us see, now, my co-laborer in the household vineyard, where we can turn a leaf. Have you kept an account of the household expenses for the last year? If not, turn a leaf right here, and begin. I know of no one practice more likely to produce good results than the strict recording of every item of expenditure; it will not only do to look over at the end of the year, to see where a leak can be stopped, but it will cause precaution, which is better than retrenchment. You will ask yourself, how will *that* look on the book? And by the *habit* of thinking they will work wonders in reform. Put down on the credit side of the account the proceeds from the sale of the household products, the dried fruit—I am glad Patuxent Planter is stimulating us to dry a great deal of fruit, as a source of revenue, and hope he will again agitate the question *with full directions*—the butter, poultry, eggs, etc., and a review of this record will show where there is likely to prove the most profit. I have spoken of economy, and have suggested a system of household book-keeping, and a close watch on current expenses; let no one suppose I have put two gold dollars before my eyes, and am looking at the sublime work of the true woman in her sphere through that opaque medium! We must take the weapons we find around us, and wield them for our regeneration, until we can forge new ones. I do not want you to get the dollars to place them where thieves may steal them; on the contrary, by my program—I hope the Editor will not change that word into that horrid thing spelled programme—there will not be a cent left in the household treasury at the end of the year, but we shall have results that will surpass the brightest gem that ever yielded its splendor to the polisher's art, or the shiniest coin that ever leaped gleaming from press or die—of which we will talk as we journey along.

MISCELLANEOUS ITEMS.

A plain sort of extension table is easily made, thus: Take a wide smooth plank, cut it so as to be as long as the dining table is wide; fasten under it two long wooden prongs, just far enough apart to slide into the ends of the opening left by the support of the table leaf when drawn out to raise it. This board forms an extra leaf, accommodating four persons; and should have a leg on the outer edge, fastened on by a hinge, to steady it when in use and fold back at other times.

Do not buy dark or very white kerosene—the light yellow is safest. Lamps with “sun-burners” economize the light most. There is a patent hanging lamp fastened to the ceiling by a strong coiled brass string, which can be pushed up or pulled down to any height at pleasure. The apparatus is durable. Such a lamp is nearly as convenient as gas, and is cheerful over the tea-table or work-table.

So the legs of ironing tables should be made, and the table itself should be long and high, and attached by hinges to the wall, to double down and save space when not wanted.

A broom is best for a regular family sweeping, and a carpet sweeper for occasional work. To clean and brighten carpets and rugs, sprinkle wet Indian meal, or snow, over them, and sweep.

Floor matting sometimes will not go down smoothly—the inside being looser than the edge of the breadth; wet the edges and it can be drawn out flat and straight.

Boys and Girls Department

[ORIGINAL.]

ABOUT SNAKES.

BY UNCLE FRANK.

Most boys—and girls too—are so much in the habit of looking upon snakes as terrible enemies, and treating them as such, that it may be interesting for you to know something about their nature and habits, and that some look upon and treat them as friends and pets.

A gentleman in London had a snake, (a Brazilian boa,) five or six feet long, which weighed twelve or fourteen pounds, which makes a good sized snake, which he called Cleo, and which he, his wife and little children handled so much that it became quite tame, and it was supposed that it knew different individuals; it would glide across the table to its master, stretch its body to the chair, crawl up and coil itself around his neck, and put its head close to his face, and quiver its forked tongue with evident pleasure. The little children would take it up and twine it around their necks. If a pigeon is put into its cage when it is not hungry, it appears to make friends with it, and will not eat it, but will devour a fresh one instantly; it feeds once in two weeks, and two pigeons last that time. Once when the family was absent it would not eat until they returned, which was a six weeks fast.

Six weeks, and nothing to eat! This appears a strange story, and yet a rattlesnake was caught in Tennessee four feet long and five inches around, which did not eat anything for four months, and took care of a family of seven little ones part of the time; it was offered mice, and the usual food of snakes, but as some snakes will eat only frogs, perhaps that was omitted.

Another rattlesnake was confined in a case for nearly four years, and did not eat anything for *nine months*, and drank only a little water. It would eat mice and rats when put into the case alive, but would not touch them if dead, even if they were just killed, nor would it eat a tame mouse. Perhaps you have read of East Indian jugglers, who make a business of charming snakes, and perform a great many operations with them; but as some of these snakes are poisonous, it is supposed the jugglers render them harmless before handling them much.

Now, can you tell me how many times a snake casts off its skin during the year, say the rattlesnake? (No doubt you have often come across these skins, particularly when working around fence corners.) It will shed its skin twice a year—spring and fall—and a new rattle will appear at each shedding, although it has been supposed but one rattle is formed in a year, and again, the rattlesnake is born with a button, which is also contrary to what has been generally been supposed, six months being the time usually allowed for the formation of the button, hence if you want to know the age of a rattlesnake when you catch it, throw off one button, and count six months for each of the others. If it has say nine rattles, one off would leave eight, which would be forty-eight months, which you know how to get into years. The Brazilian boa—Cleo—shed its skin ten times in two years. You have all heard about snakes charming the birds as they flew about in the air. A bird will be flying along, suddenly stop, hover around a certain spot, and then suddenly dart down only to fall a prey to some snake lying in wait for its food.—Instead of charming the bird, however, some contend that the noise made by a rattlesnake is scarcely distinguishable from the sound of the cicada, (which means locust,) and when a bird hears that noise, particularly one that is accustomed to feed on locusts, it is naturally drawn to the spot, and thus falls a prey to the very acute snake, who uses this means to draw within its reach the birds of the air, which otherwise it could not reach. Now I will leave the snake question with you, and if you have made any investigations of your own, let me hear what they are, and we will talk the matter over again.

Bricks, covered with carpeting, are good to set behind doors to keep them from going back against the wall.

AGRICULTURAL COLLEGE—OLD KENT.

AGRICULTURAL COLLEGE, March 19th, 1873.

Messrs. Editors: Being of a benevolent turn, I take pleasure in contributing to the happiness of my fellow-men, and being, while bent on pleasure still like good Mistress Gilpin, of "a frugal mind," I am glad to be able to do so cheaply. The joyous state in which your correspondent "Old Kent" exhibits himself in your March number, comes to me like a good thing which has cost nothing.

I had made a statement of facts, in the previous number of your journal, intended to give information to those who might want it as to the condition of the Agricultural College, and without special reference to the happiness of "Old Kent" or any body else. The state of his feelings growing out of that communication is something wonderful. Attend while I put in quotation marks some of the outbreaks of his joy as follows:—"I am heartily rejoiced"—"I am most thankful—that it has been my lot to live to read of such glorious progress and success," &c. "I call upon you, Messrs. Editors, and all my brother farmers, to rejoice with me." "I was made very happy" (over Mr. Wilkinson's communication,) "but my delight at hearing that farmers' sons, &c.—is truly ineffable." Such is the "O be joyful" strain in which "Old Kent" utters his soul's delight.

I fear I may not take all the honor of this condition of our friend's mind. It is something more than mere happiness, which is quiet and serene.—There is the very spirit here of the old singer of days past, who "*Gay and Happy*" he would be—and allowing the wide world to "wag as it will," he'd be "*Gay and Happy still*." When at the words, "Truly ineffable," his pen and his prose alike broke down, you may well imagine that "Old Kent" broke forth into singing, or that snatching his tuneful old fiddle, he sought relief in a *classic* movement on "The light, fantastic toe," if perchance the state of the toe allowed.

Now I should have nothing more to say about it, if your friend's gaiety were not a little aggressive. He is not only jolly himself, but calls on you and all the world to be jolly with him, and the great fun you are to have together is to be at my cost. I am to be the Frog at whom a lot of lively boys are to throw stones. This makes it serious for me, and a serious frame of mind moves me to investigate "Old Kent" and find out what's the matter. He is sixty years old, he says, a period which brings commonly a grave and reverend bearing; but he disports himself like a boy, and talks of even putting himself at school again. Let him take notice, we are shy of having wild boys here, and the genus, old boy, we keep, if possible, altogether out of the school.

But how is the extra gaiety of our sexagenarian to be accounted for? Let him speak for himself: "I am most thankful that I have been spared to the day that has completed a life of three-score years." It was his Birthday, you perceive. Now put that and that together and the murder is out; Birthday, Eastern Shore, Kent County and the biggest thing in Kent County, Col. Wilkins' vineyards and orchards;—I say nothing of the wine and brandy, pass them to Cols. Mills and Bowie—but put all these together, and the congratulations of friends, and the Eastern Shore dinner, and the fine old gentle-

man, and—the "Joy that [such!] a man was born into the world." There is your answer. "That's why."

So I am to have no credit after all; for the happiness that seemed to come of what I had written, is only something of the exuberance and superfluity of that festive occasion when our friend beamed and "smiled" and saw only the reflection of his own jolly countenance.

Laying aside now the jovial view of the matter, if your correspondent on "sober, second thought"—say the day after his birthday or the Sunday after—found still in what I had written fit food for his laughter, let us see if we can place it in a more serious light. He quotes me as follows, and this he makes the subject of his mirth: "We claim to give to the farmers' sons of the State, at a very low cost, a course of instruction in all that a good citizen and farmer ought to learn." This was the closing sentence of what, I made a point of saying, was a hurried communication, and I acknowledge, that a critic of language may justly find fault with it, yet it seems to me that no ordinary reader can misinterpret it. It means, (and it can be made to mean nothing else,) that we claim to give a course of instruction in all such branches of knowledge, as ought to be taught to farmer's sons, looking to their future as citizens and farmers. It was designed to bring out the idea, that to the customary course which proposes to educate a boy for his duties as a citizen, is added special instruction which will be useful to him as a farmer. This does not seem to me a very absurd or a very ridiculous claim. But to have said that we claim to teach a boy, or "Old Kent," or any ignoramus, "all that he ought to know," would have been a foolish and preposterous boast. I said no such thing. It takes more than sixty years to learn all that one ought to know. But "Old Kent" has three times misquoted my words for the purpose of making me appear to say what he knows I did not say. He may be excused if in his confusion of thought he misapprehended my meaning, but he will hardly pardon himself for three times putting into quotation marks as mine, words which I did not use.

I notice another point of "Old Kents" communication. He says: "In my old foggy ideas of an Agricultural College, I was under the (as it appears erroneous) impression that the Professor of Agriculture was quite as important in such institutions as a Drill Master or a Professor of Gymnastics, but it seems that it is not so, and that if these two professorships are well filled, the former may be dispensed with, &c."

This is bad for the College if true, and very bad for old "Old Kent" if not true. There is not now, nor has there been at any time, a teacher of gymnastics at the College, nor a Drill Master as such. The Drill is taught by an assistant instructor of the school and occupies him two and a quarter hours a week, out of school hours; while the gymnastic exercises are strictly voluntary, and taught only by the older to the younger boys in their play hours. There is not, therefore, the shadow of justification for an attempt to make your readers think that very undue importance is attached to them. "Old Kents" facts are the offspring of his imagination, phantasmoborn of his birthday brain.

I beg pardon for so extended a trespass on your patience and that of your readers, and remain, yours very truly,

N. B. WORTHINGTON.